25¢

Trains

November, 1946

A short course in Railroading ...for Airline executives

Airline executives are mighty proud of their airlines and we don't blame them. The airlines have been progressive and they have their place in the transportation scheme of things, just as the railroads have theirs.

But we wish they wouldn't spend so much time talking about the railroads in their advertising. They seem to know so many things about railroad service that aren't so!

They may know the airline business very well but they're a little hazy about the railroad business.

We don't like to mention a competing service in our advertising but now we're rather forced to talk about the airlines in order to inform the airlines (and the public, too) about some of the facts of the *railroad business.*

The airlines compare their fares with railroad fares and come to the conclusion that air travel is cheaper. But they always compare the one way fares. Since airlines make no reductions on round trips for travel in this country, the airline people apparently think the railroads don't, either. As a matter of fact, railroads make substantial reductions for round trip tickets. We figure most people have to get home sometime.

Here are some round trip fare examples:

	AIRLINE FARE	RAILROAD Coach	RAILROAD 1st Class
New York-San Francisco	$236.60	$101.50	$153.35
New York-Los Angeles			
Chicago-San Francisco	170.90	71.50	99.35
Chicago-Los Angeles			
San Francisco-Los Angeles	30.30	11.90	21.90

The airlines, in comparing fares, always add in the cost of a Pullman *lower* berth. A comparison of a seat in a plane and a berth on the train is the same as comparing a chair with a bed. The airlines aren't operating sleeper planes so the services aren't comparable on that point at all.

The airlines don't seem to know about our *Daylights*, so they don't mention the fact that you can go from San Francisco to Los Angeles and back on these luxurious streamliners, the fastest trains between the two cities, for $11.90 round trip or $3.25 less than the one way fare by plane.

And while we're talking about economy of rail travel we'd like to mention that we carry children free (accompanied by adults) when they're under 5 years of age, and at half fare when they are 5 to 11 inclusive. And children get seats for their individual use. Most airlines charge full fare for children except for a babe in arms.

In comparing their service with the railroads', the airlines forget to add in the bus fares to and from the airports (and bus travel time as well). Also they overlook their limited baggage allowances, which increase air travel cost with a normal amount of luggage. These added costs, we think, overbalance the pleasant free meal furnished air travellers when aloft.

We accept the fact that airplanes have one primary advantage—*speed.* But we think trains have a lot of advantages, too, including economy and plenty of room to move around.

CLAUDE E. PETERSON
Vice-President, SYSTEM PASSENGER TRAFFIC
SAN FRANCISCO 5, CALIFORNIA

NOTE: *Fares shown are subject to the 15% federal tax which applies to all forms of transportation.*

S·P The friendly Southern Pacific

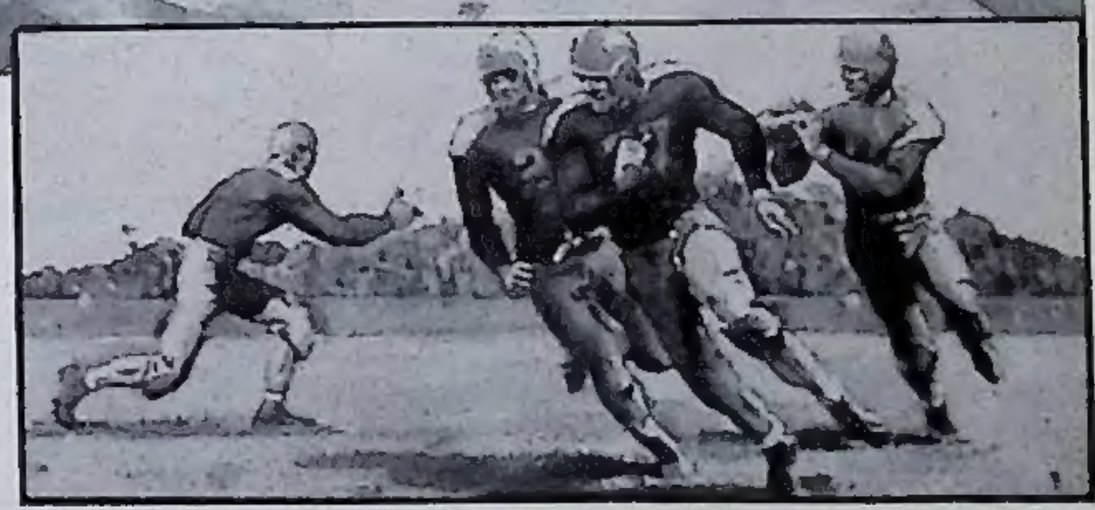
Southern Pacific, route of the streamlined *Daylights, Lark, Sunbeams* and *City of San Francisco,* now has finer, faster trains than before the war and is building more streamlined trains for 1947 delivery.

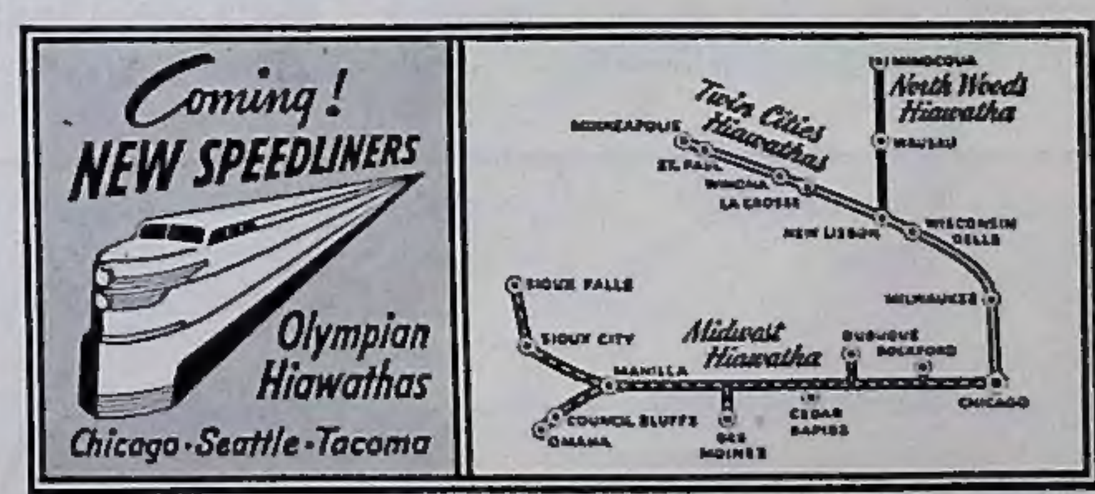
Timed to a "T"

AS EXACTING in split-second timing as football's "T" formation is the operation of the HIAWATHAS. The servicing of the trains at La Crosse, Wisconsin, is an example.

Each man of the service crew has his assignment. Water tanks are pressure-filled... bearings lubricated... wheels, brakes and running gear checked... the whole train inspected. In a few minutes the conductor raises his hand in a "high ball." With your comfort and safety reassured the big silver, orange and maroon train slips off on its swift, silent journey.

Over the years, Milwaukee Road service has steadily improved. More tons of freight move faster with fewer locomotives. Passenger schedules have been speeded up repeatedly. Yet freight rates and passenger fares on The Milwaukee are lower than a generation ago.





With new HIAWATHAS coming, our sights for serving you in the years ahead are set even higher. F. N. Hicks, Passenger Traffic Manager, Union Station, Chicago 6, Illinois.

THE MILWAUKEE ROAD

Speedway of the Speedliners

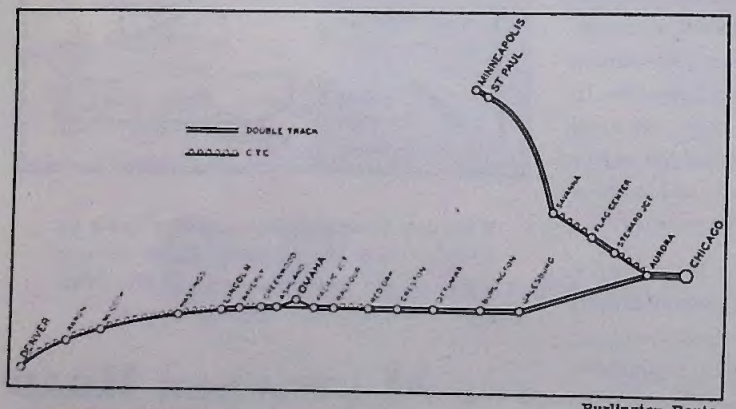
C. T. C., Cab Signaling Increase

Increased traffic and higher speeds are bringing about more installations of centralized traffic control and cab signaling, both of which have made great contributions to speed with safety in heavy traffic areas and which have permitted the retention of single track in territories handling nearly double-track volume, thus reducing investment in track mileage. Less spectacular than train radio and thus the recipients of less publicity, C. T. C. and cab signaling are nevertheless far more important than radio, whose greatest contribution is not to safety but to speed-up of operations which require communication between conductor and engineer or between yardmaster and switching crew.

The Burlington Route has just inaugurated C. T. C. between McCook, Neb., and Akron, Colo. This gives the "Q" either C. T. C. or double track all the way from Chicago to Denver, 1034 miles, raising the traffic capacity of the entire main line to 85 per cent of ordinary double-track capacity. The latest installation is the last of three links in a distance of 483 miles between Lincoln and Denver. Near-future plans call for the moving of one of the control boards from Brush, Colo., to McCook. When this is done, McCook will control all traffic on the 386 miles from Hastings to Denver — probably the longest stretch anywhere controlled by C. T. C. from one office.

Although the electrical hookup is different, using only two (sometimes three) wires to control all functions along the line rather than two wires for each function, C. T. C. might be defined as a huge interlocking. All movements are under perfect protection, for block signaling and interlocking are integral parts of the system. Coded electrical impulses are sent over two wires to accomplish the moving of any turnout and the setting of any signal, and when the work has been done by the relays and motors at that particular remote point a confirmation is automatically sent back to the operator. Train movements are planned by means of a track diagram in the control office which shows where any train is at any time. So efficient is C. T. C. that delays incident to the meeting and passing of trains are virtually eliminated, as the operator can maneuver trains in and out of passing tracks to meet changing conditions and frequently can do so without bringing either train to a stop. C. T. C. also makes it unnecessary for trains to stop while trainmen unlock, open, close and relock switches.

C. T. C. installations in the United States gained impetus during the war and played an important part in victory by speeding shipments of war materiel. As of December 31, 1945, C. T. C. mileage totaled 6495 route miles and 7384 track miles.



Burlington Route.

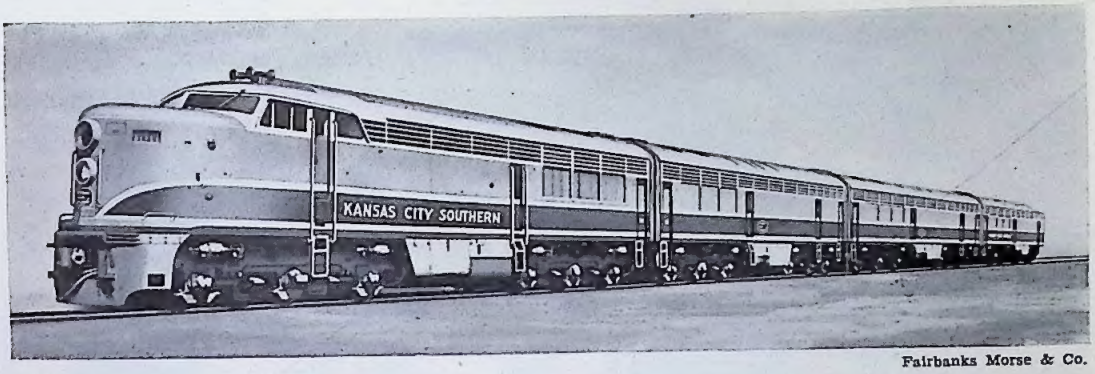
Extent of double track and C. T. C. installations on the Burlington Route.

Cab Signals vs. Radio

Despite all efforts to prevent accidents, they still do sometimes happen, but disastrous consequences are greatly reduced by the functioning of protective devices. A recent example was a freight train derailment on the Pennsylvania Railroad which spilled cars over an adjoining track on which a passenger train was approaching at 60 miles an hour, less than a mile away at the time of the accident. The last wayside signal passed by the passenger train was 1¼ miles from the point of accident, and it displayed "proceed" because the accident had not yet happened. Shortly after entering this block, however, the cab signal suddenly changed from "proceed" to "proceed at restricted speed." With this advance warning of an obstruction ahead the engineer was able to slow his train to 20 miles per hour before colliding with the wrecked freight train. An approaching freight train was stopped short of the wreck, also by means of the cab signal.

The I. C. C.'s report on this accident praised the cab signaling system and noted that even had train radio been functioning on all three trains, which it was not, "it is apparent that No. 29 [the passenger train] was so close to the point of accident when the derailment occurred that there was not sufficient time in which to warn the engineers of No. 29, had the equipment on engines of that train been in operative condition."

One flaw in train radio as a safety device is that a warning, to be effective, must be received as well as sent, and the sender has no means of knowing whether or not the message has been received. With cab signaling, on the other hand, as illustrated by the Pennsylvania accident, the warning is sent automatically and is certain to be received, for the signal in the cab not only changes but calls the engineer's attention to the change by sounding a whistle in the cab. Higher speeds can be maintained with safety, for the engineer knows that regardless of what the last wayside signal told him, the cab signal gives a true indication at all times. Thus, when a train enters a block displaying "proceed at restricted speed," the engineer may with entire safety pick up speed before the next wayside signal is



Fairbanks Morse & Co.

Probably the largest and most powerful Diesel-electric in the world, this four-unit 8000-horsepower locomotive is being built for the Kansas City Southern by Fairbanks Morse & Company. Delivery is expected in November. Each unit will contain a 2000-horsepower 10-cylinder opposed-piston Diesel engine. The complete locomotive will measure 259 feet 4 inches.

sighted, if in the meantime the cab signal has changed to "proceed."

Both C. T. C. and cab signals, like the wayside block signals, depend upon the fundamental track circuit which for nearly three-quarters of a century has been the greatest safety device applied to any means of transportation, requiring an unbroken electrical circuit to give a clear indication. Any failure of the track circuit automatically displays the most restrictive signal.

Latest innovation in C. T. C. is the use of beamed radio, commercial telegraph and cable circuits to operate the system in emergencies when regular railroad communication wires may be damaged by floods or violent storms. In a test conducted by the Pennsylvania Railroad at a signal control tower at Red Bank, Pa., a 900-mile linking of commercial circuits was used to actuate switches and signals over 53 miles of the line to Oil City. Control impulses were relayed to Pittsburgh, Washington, Philadelphia, New York, and back to Pittsburgh and the tower.

Children's Railways

An interesting feature of Russia's educational program, according to the U. S. S. R. Information Bulletin, is a system of miniature railways which are operated by Soviet children who have good marks in school. The railways run several miles and not only are operated by the children but were built and are maintained by children under the supervision of adult railway workers. Real transport needs are served. Passengers usually are children but adults are not barred.

Locomotive Notes

NYC's new poppet valve 4-8-4, No. 5500, has been assigned to the *Commodore Vanderbilt* between Harmon, N. Y., and Chicago. . . . Texas & Pacific has taken the first step in a program to replace all steam switchers with Diesels by ordering seven 1000-horsepower Electro-Motive switchers. . . . M-K-T will soon be using 10 new 1000-horsepower Diesel switchers, five now being built by Baldwin and five by Electro-Motive. . . . Seaboard Air Line has ordered 13 3000-horsepower single unit Diesels from Baldwin.

New Design Reefers

The Illinois Central has placed in service refrigerator car No. 51000, built to customer specifications. Light yet strong, all purpose, low temperature, easy riding and ice cooled, the car is the IC's answer to a request of the refrigerator car committee of the United Fresh Fruit & Vegetable Association. It makes extensive use of aluminum alloy, fiberglas insulation and forced air circulation. Collapsible bulkheads make it possible to fully ice, to partly ice, to heat or to convert the refrigerator into a box car. Fully iced, it will maintain low temperatures over long distances.

Union Pacific and Southern Pacific, joint owners of the Pacific Fruit Express Company, announce completion of an experimental lightweight reefer which includes improvements suggested by the National Fruit and Vegetable Trade Committee. Folding ice bunkers make it possible to convert the car to a box car.

Freight Rate Increase Needed

The most serious financial situation ever faced by the railroads of the United States is illustrated by the plight of the Pennsylvania Railroad, which in its 100-year history has never shown a deficit for a full year — until this year. Testifying before the Interstate Commerce Commission on behalf of an application for a freight rate increase of 19½ per cent brought by the country's railroads, PRR's Vice-President Walter S. Franklin estimated a 1946 deficit in net income of $14,616,000 after carry-back tax credits, even though substantial net earnings are anticipated for the balance of the year. The deficit results from increases in costs of more than 51 per cent for labor and 49 per cent for materials.

Burlington Train Radio

Two-way radio communication between three yardmasters' offices and 11 Diesel switchers of the Burlington Route in the Chicago switching area has proved so successful that all regularly assigned switchers will be equipped with radio as rapidly as apparatus can be obtained, the road announced at a demonstration of the equipment. Permanent installations are also being made on long freight trains to permit communication between caboose and engine. Chicago yard communication is by means of a transmitter atop the 16-story Burlington Building, direct-connected with yard offices at the 14th Street passenger yard, Western Avenue industrial yard and Morton Park train yard. Simply by picking up a telephone type instrument, a yardmaster can call any radio-

"We carry the mail—the railroads and I"

"It may be a post card or a letter, a package or a publication. The weather may be fine, or downright miserable. But regardless of what it is... or where it's from... or what the weather's like, the railroads and the Railway Mail Service bring the mail through from everywhere *in America.*

"Once the railroads get your mail to me, it's up to me to finish the job. And folks on my route know that the weather doesn't stop me, either!

"The letters I carry tell the story of the lives and personal affairs of folks all over. And I'm glad that people feel they can count on me and my partner—the American railroads!"

Yes, railroad mail is dependable, and economical too, with first-class mail carried by rail providing the surplus revenues to help support other valuable postal services.

But carrying more than 90 per cent of this country's mail is only part of the public service rendered by the railroads. In every community they serve, railroads have an equally personal relationship with local business—a partnership in which the railroads supply the efficient and dependable transportation which makes possible America's vast productive capacity.

And these railroads are home-town partners of yours. They employ local people, buy supplies locally, own local property and pay local taxes on it. As responsible local citizens, railroads neither ask nor expect financial aid from other taxpayers.

Instead, their taxes—like yours—go to make your town a better place to live in.

ASSOCIATION OF **AMERICAN RAILROADS** WASHINGTON 6, D. C.

IN PARTNERSHIP WITH ALL AMERICA

Salt Water Railroading

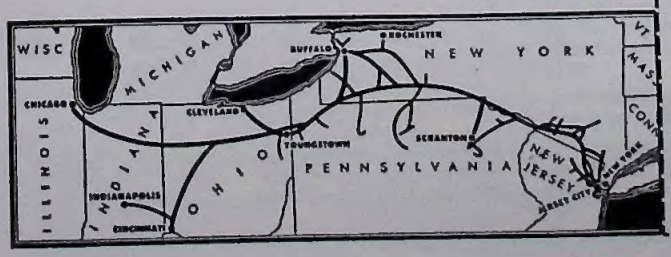
More than 230 Erie craft—tugs, barges, lighters, car floats—are assigned to freight-carrying duty in New York Harbor. One of the most interesting of the water railroading operations is the work of the Erie car floats, which ferry freight between Jersey City and stations on Manhattan Island, Brooklyn and Long Island City.

Freight cars, fully loaded, are run aboard car floats accommodating from 8 to 16 cars each, and towed by Erie tugs across New York Harbor to their destinations. It is a railroad operation unequalled in fascination anywhere.

FOR YOUR COPY OF THE NEW FOLDER—"Railroading in New York Harbor", which describes the interesting work of the Erie car floats, fill out and mail the coupon below.

Erie Railroad

SCENIC ROUTE OF THE EAST—SERVING THE HEART OF INDUSTRIAL AMERICA



R. B. Rogers, Passenger Traffic Mgr.
Erie Railroad
Midland Building, Cleveland 15, Ohio

Please send a copy of the folder "Railroading in New York Harbor" to:

Name .....

Address .....

City ..... *State* .....

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Edward Hungerford's prediction of things to come in railroading by 1960 — transcontinental trains, a national federation of companies, new routes and terminals. $5

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A Pageant of Trains, by Lucius Beebe, tells the story of America's railroads of today. Colorfully written, illustrated with exceptionally fine photos. $6

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A Book of Trains, by Lucius Beebe, is a record in vivid prose and outstanding photos of the historical development of American railroading. $6

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A. C. Kalmbach's vivid story of the romance "behind the scenes" of America's railroads. Easy, pleasant reading with 32 pages of photos. $2.75

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A 160 page facsimile of the original American Railway Guide of 1851. Every railfan will enjoy this unique document. Unaltered from original. $1

26. Railroad Avenue, by F. H. Hubbard, is one of the most complete and reliable collections of railroad lore (fully illustrated). $3.75

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28. Steel Trails, by Martin Stevers, tells the inside story of how a modern railroad is run. $3.75

KALMBACH PUBLISHING CO.
Dept. 21, Milwaukee 3, Wis.

Enclosed find $..... Please send postpaid the items I have circled below.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28		

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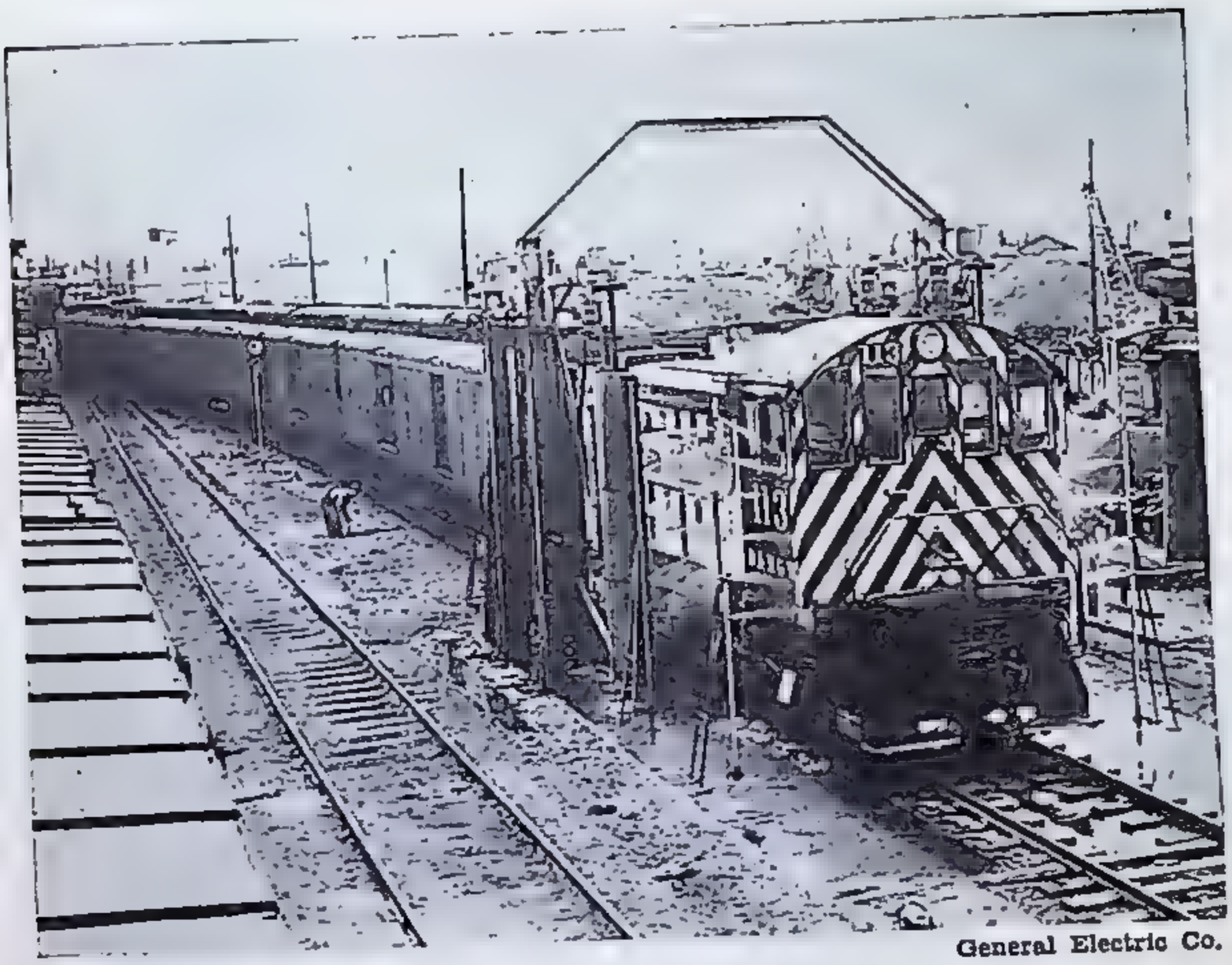
City _____ Zone _____ State _____

Raritan Local at Aldene, N. J.

Midsummer Saturday afternoon local on four-tracked main line of the Jersey Central taking weary city folk to suburban homes and cool green lawns which line the right of way. This commuter train, bound for Dunellen, is going through Aldene, N. J., while the freight is heading east for Jersey City. Both the Reading and B&O use this route from Bound Brook to the Hudson River, accounting for some heavy traffic and constant operation. Probably half the roadway is characterized by industry and shop, while the remainder consists of town and country. This dual personality is well depicted by the shrubbery and suburban train on the left and the oil tankers and suggestion of dirt and soot on the right. The bridge in the background carries the Lehigh Valley's main line which roughly parallels the Central to New York. Photo by Theo. A. Gay.

Photograph on reverse side



General Electric Co.

A switcher pulls a string of cars through the new car washer in the Burnham Yards of the Denver & Rio Grande Western. Six rotary tampico brushes powered by electric motors scrub the cars as they move slowly through the spray.

equipped Burlington switch engine anywhere in the Chicago area, and any radio-equipped engine can as simply call any of the yardmasters. Use of the radio has resulted in faster movements in the yards.

Air Mail Should Pay Its Own Way

The railroads continue to be not only the most dependable but by far the most economical method of carrying the United States mail. The taxpayers should insist that postal rates be realistic in recognizing this economy so that each type of mail completely covers its own costs.

The much publicized air mail "profit" is a phoney. Air mail may have barely paid for the actual air transportation of mail, but it has not made money if the costs of pickup, sorting and delivery are counted in. The figures for 1944, a good year for air mail and the latest for which figures are available, show clearly just how much the railroads have helped the post office support the development of air mail. The airways collected more [$28.5 million] for carrying 4½ per cent of the mail than the railroads collected [$21 million] for carrying 95½ per cent of the mail! And for their money the railroads also furnished sorting space and facilities in railway post-office cars.

Even more significant is the fact that due to canceled flights and lack of space the railroads actually carried about 40 per cent of the mail on which air mail postage was paid.

Air mail is a useful and necessary service in the commercial life of our country, but it should pay for itself. The rate for it should recognize the de luxe character of the service. The big bulk of mail can be handled much more economically and with complete satisfaction by railroad, and the user of ordinary first-class mail should not be penalized by post-office policies which subsidize air mail at the expense of railroad mail service.

New Equipment

The Chicago, Burlington & Quincy has placed orders for $15.5 million worth of new rolling stock: 17 Diesel locomotives to cost $8 million and 2200 freight cars to cost $7.5 million. Locomotives will include nine passenger and eight freight engines varying from 2000 to 6000 horsepower.

The Pennsylvania has 1100 new box cars on order for early 1947 delivery. One hundred of them will be of an unusually large size and will be equipped with newly developed devices which make possible heavier and more secure loadings. All will be built at Altoona.

Strikebound M&A Wants to Quit

Strikebound since September 6, when members of the Brotherhood of Railroad Trainmen walked out in a wage dispute, the Missouri & Arkansas has petitioned the I. C. C. for authority to abandon its entire line of 359.7 miles between Joplin, Mo., and Helena, Ark., and 5.2 miles of branch line. The wage dispute is an aftermath of the general railroad strike last spring, when railroad workers were awarded an increase of 18½ cents an hour. The application states that the railroad's financial history has been one of "consistent losses."

If the application is granted, this will be the largest single railroad abandonment in history, surpassing even the Colorado Midland, which closed its 261.1 miles in 1919.

CA&E Considers Abandonment

In Illinois, the electric Chicago, Aurora & Elgin, which has been in trusteeship, came out of the trusteeship on October 1 to be greeted with a demand for an 18½-cent increase following the "national pattern" created by government action last spring. At 4 a. m. the road became strikebound. The railroad offered "all its income" to the employees, 14½ cents an hour. A previous raise of four cents last year, the interurban line held, brought the increase in line with the 18½-cent demand.

But the strikers thought otherwise and insisted on 18½ cents over and above the previous four-cent raise, whereupon, on October 3, President Arthur L. Schwartz, ex-trustee, "seriously considered" petitioning the Illinois Commerce Commission for authority to abandon the railroad if the strike were not ended in a few days. There the matter rests as we go to press.

New Schedules

Wholesale rescheduling of trains marks the changeover from daylight saving to standard time on railroads throughout the country. Some of the more important schedule changes include NYC's *Twentieth Century Limited* and Pennsy's *Broadway Limited*, back to prewar 16-hour running time with convenient afternoon departures and morning arrivals in New York and Chicago; an evening departure for Pennsy's *Admiral* at New York, making it the last train leaving that city with morning arrival in Chi-

cago; 50 minutes shortening of time between Chicago and Waterloo, Ia., on Illinois Central's *Land O' Corn*; a similar saving between Chicago and St. Louis on IC's *Daylight*; 30 minutes faster from Chicago to New Orleans on IC's *Panama Limited*.

Central of Georgia announces Pullman service between Atlanta and Panama City. Southern now offers through service between Atlanta and Shreveport, using Illinois Central tracks between Meridian and Shreveport.

Other schedule changes include Pennsy's *Red Arrow*, *Trail Blazer*, *General*, *Rainbow* and other name trains; C&EI's *Zipper* and a new train, the *Meadowlark*, between Chicago and southern Illinois points; IC's *Night Diamond*, *Chickasaw*, *Hawkeye*, *Creole* and *Fast Mail*.

Besides rescheduling a host of trains not listed here, the NYC has also extended the run of the *Empire State Express* beyond Cleveland to Toledo and has added a new train, the *Genesee*, serving New York, Rochester, Buffalo and Toronto. Atlantic Coast Line has added eight winter season trains to Florida and other southern points. Seaboard Air Line will restore the *Orange Blossom Special* and *Florida Sunbeam* to service in December and will add a new train, as yet unnamed, between New York and Birmingham.

Monon has completed restoration of prewar passenger service with the addition of overnight service, with sleeping cars between Chicago and Louisville, with through car to French Lick Springs.

NYC Is 115 Years Old

The New York Central observed its 115th anniversary on September 24. Regular passenger service on the Central's first unit, the Mohawk & Hudson Railroad, began in 1831. This original unit, only 17 miles long, has grown into one of the great transportation systems of the world, with 11,000 miles of line and 25,000 miles of track. The system was built up of 560 separate railroads and was the first eastern railroad to enter Chicago.

Capital Expenditures Decrease

Reflecting the decline in productivity due to strikes, Class I railroads in the United States spent $20.7 million less for additions and betterments in the first half of 1946 than they did for the same period in 1945. Gross expenditures for road increased from $100.0 million to $100.7 million while expenditures for equipment declined from $139.2 million to $117.8 million.

Odds and Ends

The Pittsburgh Consolidated Coal Company has removed itself from the railroad business by selling its three lines — the Montour, the Youngstown & Southern, and a private line from Smith's Ferry, Pa., to Negley, O. — to the Pennsylvania Railroad and the Pittsburgh & Lake Erie for $9¼ million. . . . Radar is not suitable for railroad use as a safety precaution because radar travels in straight lines and can't "see" around curves. So explains a Bendix Radio release intended to clear up a controversial subject. . . . The Morristown & Erie has acquired a new locomotive, No. 12 on its roster, from the Monongahela Railway.

The Tonopah & Goldfield has applied for permission to abandon its entire line of 97.28 miles between Mina, Nev., and Goldfield. . . . Permission to abandon has been granted the 23-mile Flint River & Northeastern, which operated from Ticknor to Pelham, Ga.

C&NW will start two new "400" streamliners next year, Chicago-Ashland and Chicago-Omaha. . . . B&O's new daytime Washington-Cincinnati streamliner is well under way in Mount Clare shops and should be in service by January if material delays can be overcome.

And Liquor Taxes for More Liquor

Maybe we're in favor of the program of the National Highway Users Conference, which states: "Dedication of special motor vehicle taxes to highway purposes is a matter of increasing concern to every highway user, especially in the development of postwar highway programs. . . . The need for continued development in the postwar era makes it more imperative than ever that all special motor vehicle imposts be spent solely for highway purposes."

We guarantee our wholehearted support to this program when it is extended to include the spending of all income taxes to provide us with more income, luxury taxes to provide more luxuries, amusement taxes to provide more amusements, and railroad taxes to provide more railroad facilities.

A. C. Kalmbach.

Railroad Headlight

Arthur O. Delahunty, passenger train conductor on the Wabash between Danville, Ill., and St. Louis, is the kind of man who makes people glad that they took that train. As he lifts each ticket he tells the passenger what time the train is due at its destination; or if the passenger is going beyond St. Louis he tells him what time the train is due in St. Louis and what time his connection is due out and what track the connecting train will be on.

He has been assisting passengers in this way for a long time, realizing that a great many people seldom travel by train and are somewhat bewildered about connections. He tries to put himself in the passenger's place and furnishes whatever information he thinks would be helpful to a full enjoyment of the trip on the Wabash. He has served on the Wabash since April, 1905, and became a passenger conductor in July, 1937. Railroading runs in the family, for his 33-year-old son, who served in the railroad operating battalion in Iran, is a Wabash yard clerk at Decatur.

As tires and automobiles become more and more plentiful the railroads will stand a lot better chance of retaining patronage and the railroad men themselves will stand a better chance of keeping their jobs if there are more conductors and trainmen like Arthur Delahunty.

[Readers of TRAINS are invited to nominate railroad men for this column, giving in each case the reasons which entitle the nominee to special public commendation.]

UNION PACIFIC

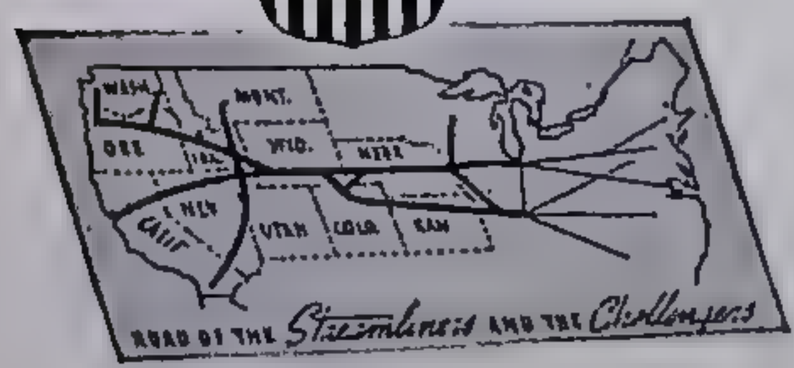
THE SEASONED TRAVELER
GOES BY TRAIN
... IN ALL SEASONS

In cold or heat or snow or rain
You get there when you go by train

Dependability! That's one big advantage of traveling by train—by Union Pacific. Furthermore ... the air-conditioned comfort, restful sleep, room to roam, delightful meals ... all these and other features go to make your train trip a vacation in itself. Going to or from the West—go as the seasoned traveler goes. Take the road of relaxation ... Union Pacific.

be Specific – say "Union Pacific"

UNION PACIFIC

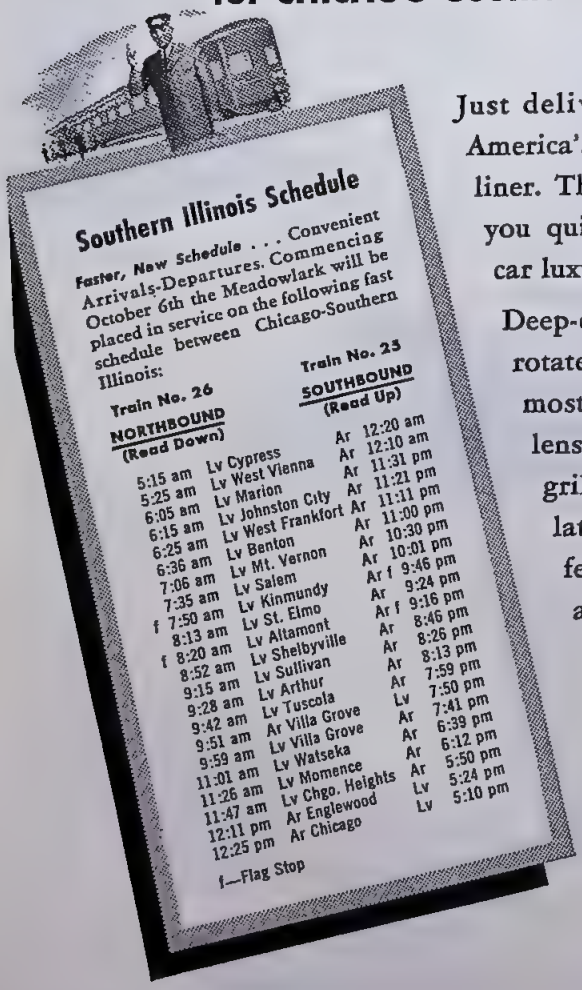


UNION PACIFIC RAILROAD

The Meadowlark

CHICAGO-liner

a thrilling New Treat in "Floating Comfort" for CHICAGO-Southern Ill. Travelers



Southern Illinois Schedule

Faster, New Schedule . . . Convenient Arrivals-Departures. Commencing October 6th the Meadowlark will be placed in service on the following fast schedule between Chicago-Southern Illinois:

Train No. 26 NORTHBOUND (Read Down)		Train No. 25 SOUTHBOUND (Read Up)
5:15 am	Lv Cypress	Ar 12:20 am
5:25 am	Lv West Vienna	Ar 12:10 am
6:05 am	Lv Marion	Ar 11:31 pm
6:15 am	Lv Johnston City	Ar 11:21 pm
6:25 am	Lv West Frankfort	Ar 11:11 pm
6:36 am	Lv Benton	Ar 11:00 pm
7:06 am	Lv Mt. Vernon	Ar 10:30 pm
7:35 am	Lv Salem	Ar 10:01 pm
f 7:50 am	Lv Kinmundy	Ar f 9:46 pm
8:13 am	Lv St. Elmo	Ar 9:24 pm
f 8:20 am	Lv Altamont	Ar f 9:16 pm
8:52 am	Lv Shelbyville	Ar 8:46 pm
9:15 am	Lv Sullivan	Ar 8:26 pm
9:28 am	Lv Arthur	Ar 8:13 pm
9:42 am	Lv Tuscola	Ar 7:59 pm
9:51 am	Ar Villa Grove	Lv 7:50 pm
9:59 am	Lv Villa Grove	Ar 7:41 pm
11:01 am	Lv Watseka	Ar 6:39 pm
11:26 am	Lv Momence	Ar 6:12 pm
11:47 am	Lv Chgo. Heights	Ar 5:50 pm
12:11 pm	Ar Englewood	Lv 5:24 pm
12:25 pm	Ar Chicago	Lv 5:10 pm

f—Flag Stop

Just delivered from Pullman-Standard! America's *newest* and *finest* postwar streamliner. This ultra-modern new train brings you quieter, smoother, roomier lounge-car luxury *at regular coach fares.*

Deep-cushioned seats that recline and rotate in many restful positions . . . thermostatic air-conditioning . . . individual lens lighting . . . a hospitable lounge-grill car—these are but a few of the latest, up-to-the-minute innovations featured in the spacious, beautifully appointed new *Meadowlark* CHICAGO-liner.

Yes, the *Meadowlark* CHICAGO-liner brings you *faster* and *safer* travel than ever before . . . plus a thrilling new travel treat we hope you'll try soon.

CHICAGO & EASTERN ILLINOIS railroad

The Chicago Line

SPEED C&EI SERVICE The CHICAGO Line

Locomotive Utilization

Extended runs and better maintenance have increased locomotive mileages 30 per cent in 30 years

BY J. M. NICHOLSON*

The utilization of locomotives is a phase of railroad operation that has grown to major importance in the last generation. Through greater utilization of existing power, the railroads of the United States are now handling 30 per cent more traffic than they did, locomotive for locomotive, 30 years ago.

The responsibility for getting the most out of locomotives belongs not only to the mechanical department, but the operating department as well. Watching the accumulation of power at turn-around terminals, the operating department keeps the number of locomotives to the minimum required to protect the business at hand. Any excess idle engine hours are arranged to be put in at the maintenance terminal so that major repairs can be made during such layovers, resulting in keeping locomotives in service when they are needed.

Forty years ago, road locomotives were assigned to individual engineers. This confined the utilization of any particular locomotive to the mileage made by the crew, which averaged in freight service about 3000 miles and in passenger service about 4000 miles a month. Thirty years ago, a pooling program was started so that a locomotive could go back into service ahead of the layover time of the crew. Confined largely to through passenger and through freight service, this resulted in an improvement in the monthly mileage made per locomotive.

Between 1918 and 1920 some engine runs were extended over more than one crew district. Servicing was done at the intermediate point and the engine was either run through on the next train, or relayed on the next following train. Light repairs were made at the turn-around terminal; heavy running repairs at the maintenance terminal, usually at one end of the run. After a few years, locomotive runs were extended over three and four crew districts, and by 1922 freight runs over three crew districts and passenger runs over four crew districts were not uncommon. Runs were gradually extended even farther, so that on the Santa Fe. for example, in a typical month:

The longest Diesel passenger run was from Chicago to Los Angeles, 2226.6 miles.

The longest steam passenger run was from Kansas City to Los Angeles, 1782.5 miles.

The longest Diesel freight run was 459.3 miles.

The longest steam freight run was 637.4 miles.

Today, practically all through freight and passenger locomotives are operated on an extended run program which is worked out to give maximum utilization consistent with the type of service and the location of terminals where heavy maintenance is performed. The extended run has required a high standard of maintenance. Locomotives must be able to make the round trip back to the maintenance terminal with a minimum of repairs. Each engine in extended run service is assigned a particular maintenance terminal, and the master mechanic in charge of that terminal is responsible for the condition of that locomotive. Terminals through which the locomotive passes while in use are responsible for proper servicing and for such minor repairs as are needed to return the locomotive to its maintenance terminal.

In addition to the regular repair program, the Santa Fe, for one, makes certain inspections and repairs beyond the requirements of the Interstate Commerce Commission, at the time of the regular monthly inspection. This materially reduces the out-of-service days for such repairs.

In order to get rapid turning of power at maintenance terminals, sufficient forces are maintained on the second and third shifts to repair and turn power with the same regularity as the first shift. Locomotives are inspected as soon as possible after arrival, usually within one hour. Only in rare cases is an engine in the terminal more than two hours before inspection

*Adapted from an address by Mr. Nicholson, assistant to vice-president, Atchison, Topeka & Santa Fe Railway System, before the Pacific Railway Club, San Rafael, Calif.

is made. This enables roundhouse foremen to reduce terminal time materially by first servicing and repairing the locomotives which have little work to be done, allowing more time for locomotives which require heavier work and yet making available enough power to handle trains.

Much time has been saved in returning locomotives to the road by redesigning terminal servicing facilities. The usual terminal layout in the days of the short run included inbound and outbound tracks to the roundhouse, with fuel, water, sand, and fire-cleaning facilities so arranged that it was necessary to make three or four stops to supply the locomotive, and this required about 30 minutes' time. Added to the time required to move from the train to the roundhouse and back to the train again, and to make the air test, this was often greater than the time required to switch the train. Now terminals are designed to supply fuel, water, and sand and to give fire-cleaning attention at one spot, pits being provided for underneath inspection and greasing at the same time. The outbound engineer meanwhile makes his oiling and inspection round. This has cut servicing time to 10 minutes.

In switching service, each terminal assignment is analyzed and, when possible, tricks are grouped so that a locomotive will work three consecutive tricks before being turned into the roundhouse for repairs and servicing. When three consecutive tricks are not feasible, two are worked; and such tricks as cannot be grouped are worked individually, the engine taken to the roundhouse and returned to service on the following trick.

Equally as important as reducing servicing time has been the reduction of time required to handle classified repairs. For many years repair shops were operated eight hours a day and six days a week. Now a second shift stretches the working day to 18 hours, resulting in a very substantial decrease in out-of-service days. The Santa Fe successfully maintains a program of turning out Class 3 repairs in 30 days, Class 4 repairs in 20, and Class 5 repairs in 12. Power out of service on this railroad for Class 3 and heavier repairs runs about 3 per cent. Locomotives out of service for Class 4 and 5 repairs also average about 3 per cent.

The average locomotive on the Santa Fe in both freight and passenger service works approximately 12 hours a day, undergoes repairs eight hours, and spends four hours waiting for a train after repairs are completed.

With present operations on most railroads, no through freight or passenger power is stored serviceable, and this has resulted in using as a yardstick the average mileage made by all locomotives assigned to various extended runs, regardless of whether they are in the shop for repairs, held in the roundhouse, or working. During one month, the Santa Fe averaged 324 miles per day for all locomotives in passenger service, 161 miles in freight service, and 100 miles in switching service. Approximately 95 per cent of all Santa Fe through freight and through passenger locomotives are operated on extended run schedules over two or more engine crew districts. Freight locomotives in this service averaged 5671 miles in a typical month; locomotives on the longest run averaged 8924 miles. Passenger locomotives averaged 10,291 miles, with those on the longest run averaging 15,122 miles. One freight locomotive registered 11,149 miles a month, while the highest mileage run by a passenger locomotive was 19,991.

Along with other western roads, the Santa Fe must use water with a high sulphate, carbonate and alkali content, which produces boiler scale. Twenty years ago it was necessary to wash boilers every 500 miles, but today, with improved water treatment and the blowing-out of boilers at regular intervals, many locomotives operate 30 days between washouts. Locomotive boilers are operated at a higher rate of evaporation than in former years, with a reduced amount of foaming and priming; this has materially reduced time required to make repairs.

Improved lubrication methods and the use of roller bearings have also increased the availability of locomotives. Other factors contributing to higher utilization are improved design and materials, ample stocks of standardized repair parts, larger fuel and water tanks, education of enginemen, and competent supervision.

Santa Fe Diesel locomotives are used to the extent of 15 per cent of the total gross ton-miles in freight service, 9 per cent of car-miles in passenger service, and 37 per cent of total switching miles. Typical monthly average mileages are: freight, 9037; passenger, 14,893; and switching, 3603. Diesel switchers have an availability of about 86 per cent.

While mileage per locomotive has increased about 30 per cent for all railroads in the United States since 1917, the Santa Fe has shown an increase of 60 per cent. Thus, with 1700 locomotives, this railroad handles business that would have required 2720 locomotives in 1917.

Santa Fe.

Between Runs Santa Fe terminal at Argentine, Kan.

Keeping Them Rolling

The forces which keep motive power and rolling stock in condition are more important than the train crews

A PHOTO STORY

Railroads consist of far more than engines, cars, engineers, firemen, brakemen and conductors. Like the star fullback who scores the touchdowns for his team, these visible parts of a railroad's equipment and crew could do little without the support of teammates whose jobs are less spectacular but more important to the smooth functioning of schedules. Locomotives require care at the end of every run. Passenger cars do, too. And in their maintenance are employed more workers than it takes to actually operate the trains.

On these and the following pages are pictured a few of the extensive terminal facilities and operations involved in the maintenance of a railroad.

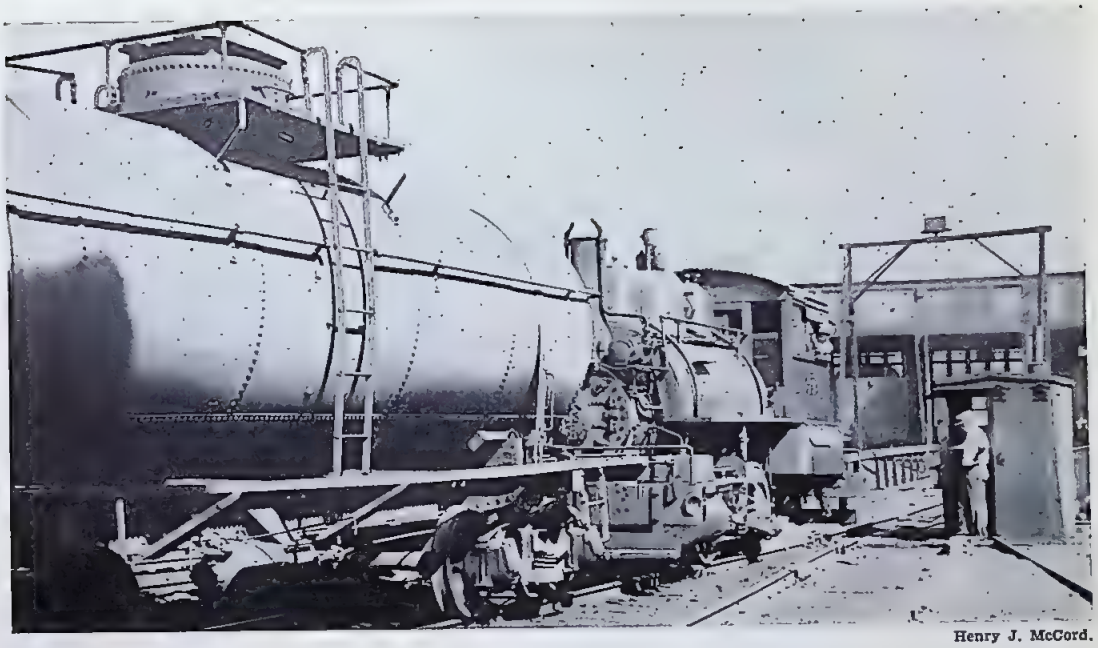
Henry J. McCord, Batavia, Ill.

Locomotives need oil and grease as well as fuel and water to make them run smoothly and efficiently, and after every run each locomotive gets a thorough lubrication in the roundhouse shops. ← This Burlington shop worker uses a grease gun to force heavy lubricant into the rod connections to the driving wheels. Lubrication is only one of many servicing jobs which are done at the end of every run.

Henry J. McCord.

Heart of any railroad division is its roundhouse and car shops. The combined locomotive and car facilities of the Alton Railroad at Bloomington, Ill., are pictured here ↑. The roundhouse is in the background toward the left side of the photograph. Car shops are to the right. Another phase of railroad maintenance is portrayed by the section gang in the foreground, laying new ties in the yard throat. Sectionmen rank first in the number of persons employed by railroads; skilled trades helpers employed in the maintenance of equipment and stores rank third; car builders and repairmen rank fourth; machinists, eighth. Shop employees and others engaged in rolling stock repair numbered 389,176 in 1944.

Henry J. McCord.



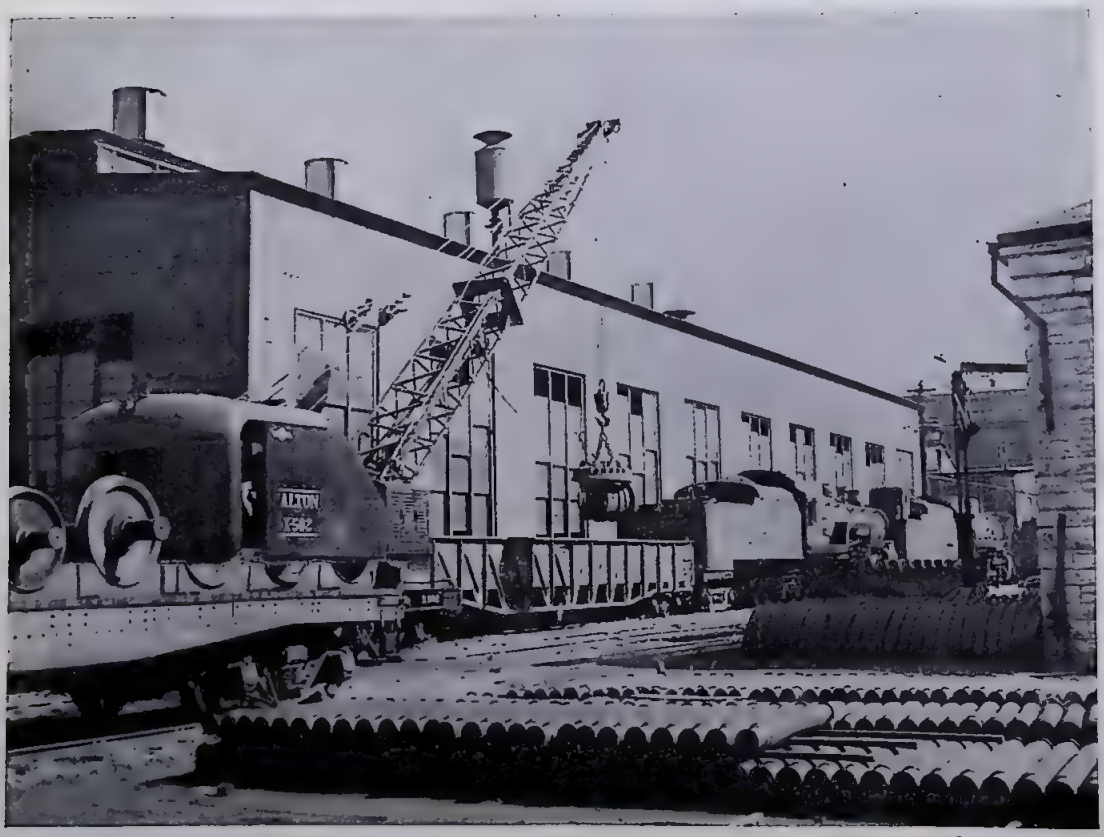
Henry J. McCord.

← Samples of lubricating oil and water are taken from incoming Diesels and by the time the engine has reached the shops an analysis determines its condition. ↑ Shop "goat" pulls an auxiliary water tank. ↓ An inspector checks Diesel brakes.

Henry J. McCord.

Atchison, Topeka & Santa Fe.

↑ At the Santa Fe Railway's extensive car shops in West Wichita, Kan., "bad order" cars are repaired and even rebuilt. Many railroad "rip tracks" are without shelter of any kind although the work continues the year 'round. Similar facilities are maintained for the servicing and repair of passenger cars, which, like locomotives, get at least a cleaning after every trip. ↓ A huge electromagnetic crane is used to load scrap car wheels at the Bloomington shops of the Alton Railroad. A terminal facility seldom thought of by the traveling public is the railroad crew callboard ↘, where crews are assembled with due regard to seniority rights. Callboys' bicycles are outside the Burlington crew caller's office at Galesburg, Ill. ↗.



Henry J. McCord.

Both photos by Henry J. McCord.

Baltimore & Ohio.

A B&O engine in the early stages of heavy repairs ↑. Boiler sheathing and lagging are removed before the engine is taken into the shops. Burlington locomotives undergo routine repairs and inspection at Galesburg ↓. Men repair flues →.

Henry J. McCord.

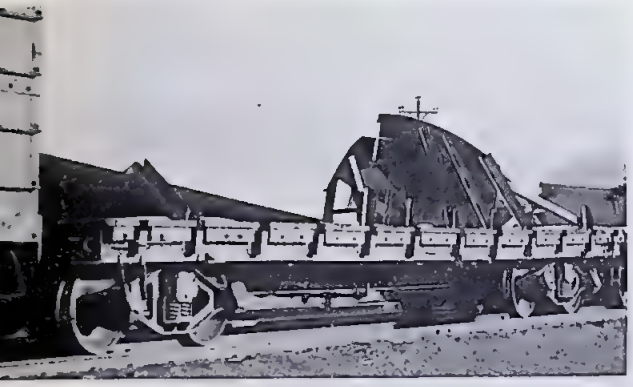
Henry J. McCord.

Both photos by Henry J. McCord.

The steam locomotive's thirst is insatiable, and extended runs often require the use of auxiliary tank cars to carry part of the 600 billion gallons of water which the railroads annually turn into steam. Fortunately, in most areas water is cheap, and it makes little difference when a tank is filled to overflowing (top). Just as an army operates best when it is clean, so, too, does a locomotive. ↑ Alton employees are here shown giving an engine a steam bath to remove accumulated dirt and grime. Railroads of the United States burn as much as 139 million tons of coal a year. → Coaling a Burlington engine.

Henry J. McCord.

Behind a 5400-horsepower Diesel, the 30-car boat train leaves the Denver yards en route to the Pacific Coast.



Huge, odd shapes make up the consist of this unusual train.

A 3500-class helper gives it a boost to the Moffat Tunnel.

Boat Train on the D&RGW

One of the most unusual railroad tasks of the late war was the moving of complete but unassembled L. C. T.'s (landing craft, tanks) by the Denver & Rio Grande Western over the continental divide to the Pacific Coast. These were the largest complete craft fabricated away from waters suitable for launching them. Five Denver firms pooled a large navy contract for the prefabrication, and when an L. C. T. moved out of the Denver yards it was complete except for assembly and the installation of its power plant, which came from a different source.

Each L. C. T. required a 30-car train. Occasionally, when it was possible to schedule two boats without delaying either, trains were consolidated into one of 60 cars. Nearly 150 complete craft were moved without undue incident despite the loading and clearance problems involved. One superstructure standing 18 feet 3 inches above the railhead was always a tricky problem in negotiating two tight tunnels.

The train rounds a sharp curve at Arena ↓, 30 miles from Denver, and passes through Gore Canyon hours later →.

All photos courtesy D&RGW

H. F. Harvey, 65 Olean St., Worcester, Mass

Richmond-Washington

This most vital link of the South-East is all main line with very heavy traffic under ATC protection

BY E. L. THOMPSON

Not many railroads extending only 118 miles, including trackage rights and having no branches whatsoever, occupy the enviable position of the 112-year-old Richmond, Fredericksburg & Potomac. It enjoys a fine business, both passenger and freight, serving as a connecting link between the Pennsylvania and Baltimore & Ohio, which terminate at Washington, and the Atlantic Coast Line and Seaboard, which terminate at Richmond, Va. More than 90 per cent of its freight traffic originates on the connecting railroads, and Florida-bound tourists swell its passenger revenues to 40 per cent of the total receipts.

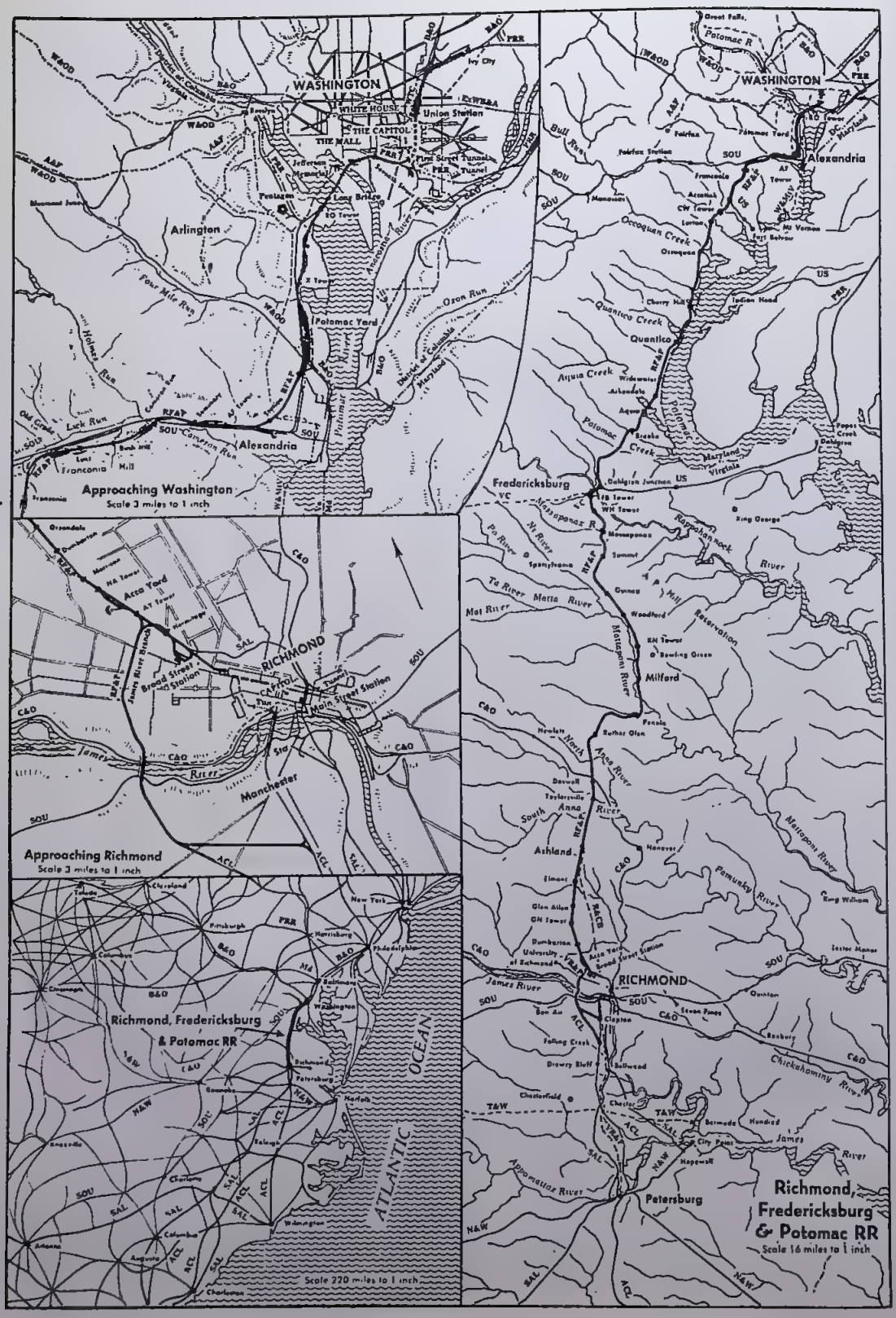
Over RF&P's 130 pound rails roll northbound citrus fruits and phosphate rock from Florida, sugar from Cuba, bananas from Central America, cotton, cotton fabrics, paper, pulpboard, leaf tobacco, petroleum and railroad ties — all gathered up and funneled to the RF&P by the Atlantic Coast Line and Seaboard; southward go fertilizers, canned goods and miscellaneous merchandise collected by the B&O and Pennsy. Also contributing to the traffic are the Chesapeake & Ohio and the Southern Railway. These six railroads own equal shares in the Richmond-Washington Company, which controls the RF&P.

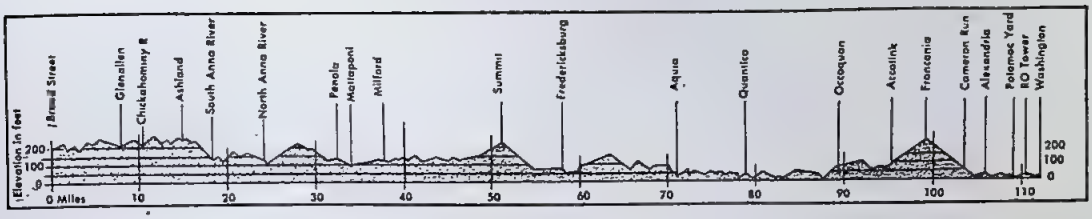
While RF&P passenger trains join Richmond with Washington, freight service extends only as far north as Potomac Yard, six miles south of Washington. Potomac is one of the most important interchange points in the East [TRAINS, Nov. '40], and the Pennsy and B&O move the freight north

H. F. Harvey.

Bruce D. Fales, 1915 Elkhart St., Silver Spring, Md.

The RF&P is the only railroad which crosses the Potomac River between the Atlantic Coast and the Blue Ridge Mountains, and consequently the bulk of East-to-South and South-to-East traffic must pass over its rails and Long Bridge. More than 90 per cent of RF&P freight traffic originates on other railroads. ← Engine 551 leaves Potomac Yard ↓ southbound for Richmond. → Engine M-1 makes a daily commuter round trip between Fredericksburg and Washington.


WASHINGTON
WHITE HOUSE
THE CAPITOL
THE MALL
Union Station
Arlington
Potomac Yard
Alexandria
Approaching Washington
Scale 3 miles to 1 inch
Fredericksburg
Milford
Ashland
RICHMOND
Petersburg
Richmond, Fredericksburg & Potomac RR
Scale 16 miles to 1 inch
Area Yard
Broad Street Station
Main Street Station
Manchester
Approaching Richmond
Scale 3 miles to 1 inch
Richmond, Fredericksburg & Potomac RR
ATLANTIC OCEAN
Scale 220 miles to 1 inch



of this point through Washington. Heaviest concentration of freight is in the spring, when berries and fruits must be moved to northeastern markets. Refrigerator cars are the order of the day, and the icing plant at Potomac Yard puts in a great deal of overtime. During the first six months of a recent prewar year more than 1000 trains of perishables were moved from Acca Yard (Richmond) to Potomac Yard.

Passenger trains from Washington follow the tracks of the Washington Terminal Company through the First Street tunnel under the Capitol to Virginia Avenue Tower, where trackage rights begin over the Pennsylvania's freight route, ducking through southwest Washington to come out on an elevated line at 14th Street. Just before the Long Bridge crossing of the Potomac River, the new Jefferson Memorial comes into view on the right. Beyond the bridge, RO Tower is passed on the left. This is the beginning of the RF&P, and as the train slips along the Virginia countryside Potomac Yard can be seen at the left. The freight tracks have been electrified this far so that Pennsylvania engines can haul their own trains to and from the yard.

Alexandria, eight miles from Washington, is a historic city of some 34,000 population, made famous by George Washington. As the train stops here in the Union Station the new Masonic memorial to this exalted American is visible on the right, towering high in majestic glory. Alexandria is the division headquarters of the Southern Railway, whose roundhouse and local yards are on the left.

A mile beyond is AF Tower, where the freight and passenger tracks of the RF&P join with the freight tracks of the Southern and then immediately spread into the main lines of the Southern and RF&P. Southern Railway passenger trains use the RF&P route from Washington to this point. Both lines turn west and follow Cameron Run past the yards and shops of the Fruit Growers Express. At Seminary the RF&P starts climbing and in another mile it bridges over the Southern near that road's CR Tower [see page 67]. Along the south bluffs of the valley the track continues up Franconia Hill to an elevation of 225 feet, the highest on the system. It then bends southward toward Richmond. Franconia is the longest climb on the line, being nearly five miles in either direction. The ruling grades are 0.6 per cent northward, 0.8 per cent southward.

At Accotink a government-owned railroad bears to the left for a 4½-mile run to the important army post of Fort Belvoir. The army has its own switch engines, and the RF&P interchanges cars in the small yard at this point.

Occoquan Creek is crossed on a handsome bridge at Occoquan. It is a favorite spot for railfans, as the highway parallels the railroad and excellent pictures can be made of trains coming off the bridge. Between here and Quantico several creeks and rivers are crossed, and the line follows the Potomac River part way.

Quantico is headquarters of the Marine Corps, and so is a vital point on the RF&P. While its permanent population is only slightly more than 1000, it was a beehive of activity during the war. On wartime week ends, traffic north out of Quantico was so heavy that passengers were loaded through specified vestibules, tickets being taken before they boarded the train. From here on into Washington, trains were generally so jammed that it was almost impossible to walk through 14 cars during the 35-mile trip, let alone to try to collect fares.

A short distance south of Quantico the railroad crosses Aquia Creek, and to the left, abutments of an old pier still can be seen, recalling the early days of the RF&P when its line ended here and connection was made with Washington via boat. A new $1.2 million bridge here cuts running time by eliminating a long standing slow order.

Just before crossing the Rappahannock on a fine stone bridge, Dahlgren Junction — a brand-new station — flashes by on the left. Here at the junction is another government-owned railroad, running approximately 24 miles to the Dahlgren Naval Proving Station. As at Accotink, cars are interchanged in the local yard, from

which point they move by government power.

Aside from Alexandria, Fredericksburg is the only intermediate city of any size on the entire line. It is 54 miles south of Washington and 59 north of Richmond, and so is the approximate center of the railroad. Ten thousand people make this city their home. Many of the through trains, and all of the Washington-Richmond trains, pause at the new and modern station. When a stop is made, steam engines generally take water just to be on the safe side.

Extensive improvements were made during the war from Fredericksburg to WH Tower, and now two long sidings make a sandwich of the main line starting at Hazel Run, opposite the roundhouse and freight yard. Out of these yards the Virginia Central does most of the switching and placing of cars on industrial sidings. The VC used to extend to Orange, but now only one mile of line is left.

Just beyond WH Tower is Massaponax, where the RF&P once had a gravel-washing plant. Milford, a few miles south, has several active industries and sidings, and is the nearest point to A. P. Hill military reservation. At Penola the train literally rolls around a long superelevated two-degree curve. Doswell, where the Chesapeake & Ohio Railway is crossed at grade, saw

Bruce D. Fales.

↑ Still within the yard limits of Potomac Yard, engine 504, equipped with an auxiliary tender, drags full tonnage past the passenger station at Alexandria, a mile north of AF Tower. This train, RC-9, leaves Potomac Yard at approximately 12:01 p. m. daily, arriving at Acca Yard at 4 p. m.

many troop trains interchanged during the war.

Then comes Ashland, where the train rolls cautiously right down the center of the streets, restricted to a speed of only 20 miles per hour. This adds five minutes to the running time. The population is only 1718, but it is 1.4 miles from one end of the town to the other. From here into Richmond is more of the typical Virginian countryside. The north end of Acca Yard is encountered at Greendale, some 4½ miles north of Richmond. For many years the yard limits were at NA Tower, but the summer of 1944 saw the enlarging of these facilities and the opening of a new tower. Before reaching AY Tower, the roundhouse and shops can be seen on the right.

AY Tower is the railroad term for Acca Wye, where Atlantic Cost Line trains come in off the James River branch to make the loop into Broad Street Station. Just beyond AY, on the left, is the interchange point with the Seaboard, known as Hermitage. Seaboard trains bear left from here and loop around through Richmond for 3.9

miles to make their stop at the antiquated Main Street Station. From Hermitage the RF&P line bears sharply to the right and then left into Broad Street Station, and then continues left to make a complete loop and join again at Hermitage. All trains, whether bound north or south, go through Broad Street Station in the same direction—south. This arrangement causes some confusion in mileages on the RF&P, making the line 113.1 miles long southbound and 113.5 miles long northbound.

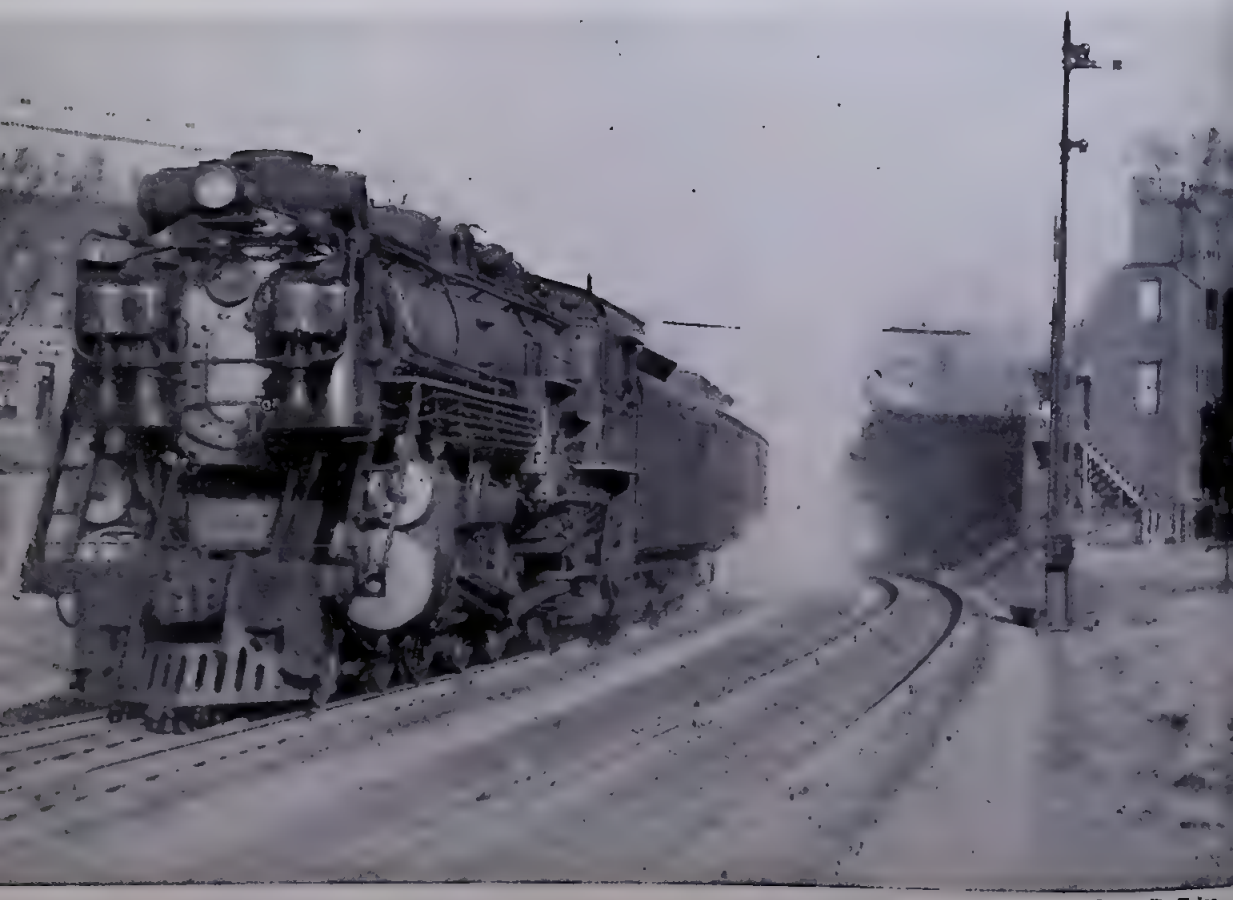
Aside from the loop at Richmond, the sharpest mainline curvatures are 2 degrees 45 minutes at Fredericksburg and 2 degrees 30 minutes at Brooks. Most curves are about 2 degrees, all superelevated for speeds of 70 miles per hour. A rubber-cushioned diamond at Doswell allows maximum speed through that point, once restricted to 40 miles an hour.

An unusual characteristic of the railroad is the almost total lack of power with two-wheel pony trucks. As a matter of fact, until the purchase in 1943 of 10 Lima Berkshires and three Mallets from the Chesapeake & Ohio for use in Potomac Yard, the roster showed nothing but four-wheel pony trucks and a complete absence of typical freight-design locomotives.

Power was once predominantly Pacific type, and this type still outnumbers other wheel arrangements although two-thirds of the present roster of 115 locomotives consists of 4-8-2's, 4-8-4's, 2-8-4's, 2-8-2's and switching types, both steam and Diesel. There are 13 light Pacifics and 25 heavy-duty engines of this class, a total of 38. Ten Mountain types are on the road, and 27 4-8-4's, as well as the 10 Berkshires and three Mallets.

Until this year the roster also listed one Ten-

Passenger travel on the RF&P is the safest in the country. In its entire history only one passenger has ever been killed on this railroad, and that one fell between cars years ago in defiance of a rule prohibiting passengers to be on platforms. ↓ Engine 307 emerges from First Street tunnel, Washington, southbound with the Cotton States Special, destined for the Seaboard Railway at Richmond. → Hauling an Atlantic Coast Line train south from Alexandria (in distance) is RF&P's 307.



Bruce D. Fales.

Wheeler as well as four more light Pacifics which have been scrapped. The Ten-Wheeler was the road's oldest engine, built in 1903. The 200 and 400 series Pacifics were added between 1907 and 1915, and most of these are still in service, usually on passenger trains.

With the beginning of the lush days in Florida, larger power was essential, and during the years following World War I engines 301 to 312 were put in service. These were followed in 1927 with four of the largest Pacifics in service on any line. As originally built, with 210 pounds pressure, they exerted a tractive effort of 48,580 pounds, but by increasing the steam to 225 pounds the very high figure of 52,050 pounds tractive effort was secured. With 75-inch drivers, these made very fine engines, and although they are now converted back to approximately their original power, they are as a group still one of the finest classes of Pacifics in the country.

Just prior to the purchase of these Pacifics, the road placed in service its only Mountain type engines (until the receipt of six N&W engines in 1944), numbered 501 to 504. These were intended for freight service.

Faster schedules, both for freight and passenger service, were in demand, and it was becoming quite a handicap to have to stop all trains at Fredericksburg for water. Many of the engines were supplied with auxiliary tank cars, carrying an additional 10,000 gallons of water. With such an arrangement, no stops were necessary for operating purposes.

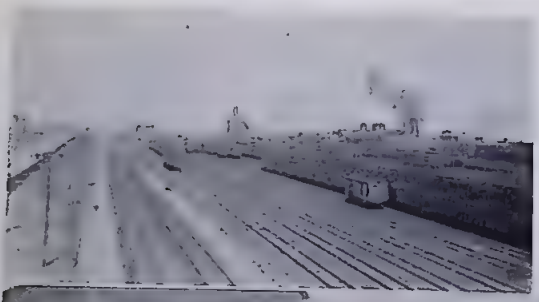
Finally, however, in 1937, it was deemed advisable to purchase still larger engines, with tanks of sufficient size to make the run without

Donald W. Furler, 65 Glen Ave., Glen Rock, N. J.

stops of any kind. Five engines of the 4-8-4 type, numbered 551 to 555, were delivered by Baldwin and named after famous Virginian generals. While they were designed for either freight or passenger service, they are regularly assigned to freight. With the 1943 improvements on Long Bridge over the Potomac, it is possible to operate them in and out of Washington.

Since the Generals were confined to freight service, it was decided to buy half a dozen of the same type of engines, although somewhat lighter in construction, and the following year Baldwin supplied engines 601 to 606, the Governor class, named after former governors of Virginia. They performed so creditably that six additional locomotives, 607 to 612, were ordered in 1941, another six again in 1945.

Not to be overlooked are the passenger Die-



↖ Before electrification of Long Bridge over the Potomac. The southbound Miamian reaches Virginian soil behind the RF&P's No. 328, a Pacific. ← Potomac Yard as seen from the Washington & Old Dominion bridge, looking north. Main line at left. ↙ No. 258, an RF&P light Pacific, photographed at B&O's Ivy City roundhouse, Washington. ↓ No. 504, just in from Richmond, poses at Washington. This is the last of a series of five Mountains delivered by Alco in 1925. RF&P power also includes arrangements of 4-6-0, 4-8-4, 2-8-4 and 2-8-8-2 besides Diesels and six- and eight-coupled switchers.

All photos by Bruce D. Fales.

sel locomotives which, while not owned by the RF&P, are a part of the daily procession of trains from the South to Washington. To the RF&P, this new form of power, which rates so many favors on other lines, is just another engine. The road has no hesitancy in wedging a 17-car train hauled by a 600-class engine in between two Diesel-powered trains. Since the maximum speed limit is but 70 miles an hour with any engine, they generally manage to hold their place in the parade.

The RF&P was chartered on February 25, 1834, it was the sixth railroad in the state and the third to be operated by steam. Operations began in 1836 and by 1842 Aquia Creek had been reached. Ten years after its incorporation it was possible to travel from Richmond to Washington via the rail-water combination, the trip taking 8½ hours. Today the trip takes less than three hours on some of the fastest trains, and even freight has been moved from Acca Yard to Potomac Yard in three hours. The railroad claims the distinction of being the oldest American railroad which has existed and operated under its original name and without reorganization, and it is the last remaining company in which the Commonwealth of Virginia still holds stock, purchased as one of a large number of investments for the encouragement of early transportation enterprises. The Commonwealth's original investment of $275,200 has gradually expanded in value through the years of operation to the present amount of nearly $2 million. In addition, the same original investment has earned another $5 million in dividends paid as cash to the Commonwealth treasury.

→ Part of the terminal facilities at Acca Yard, Richmond. Several Atlantic Coast Line locomotives are shown in the foreground. ↓ Seaboard Railway train 93 draws a clear board at the entrance to Acca Yard. Of the 38 passenger trains which pass beneath this signal bridge daily, 34 are through trains to or from the South via the Seaboard or Atlantic Coast Line. The entire RF&P main line from RO Tower south to Richmond is protected by cab signaling and automatic train control, and locomotives proudly display a sign: "Automatic Train Control. Safety First Always."

Wiley M. Bryan, 406 E. Geer St., Durham, N. C.

Alco's 75,000th Locomotive

Newly designed three-unit, 6000-horsepower Diesel embodies new operating economies. It will speed Santa Fe's Super Chief

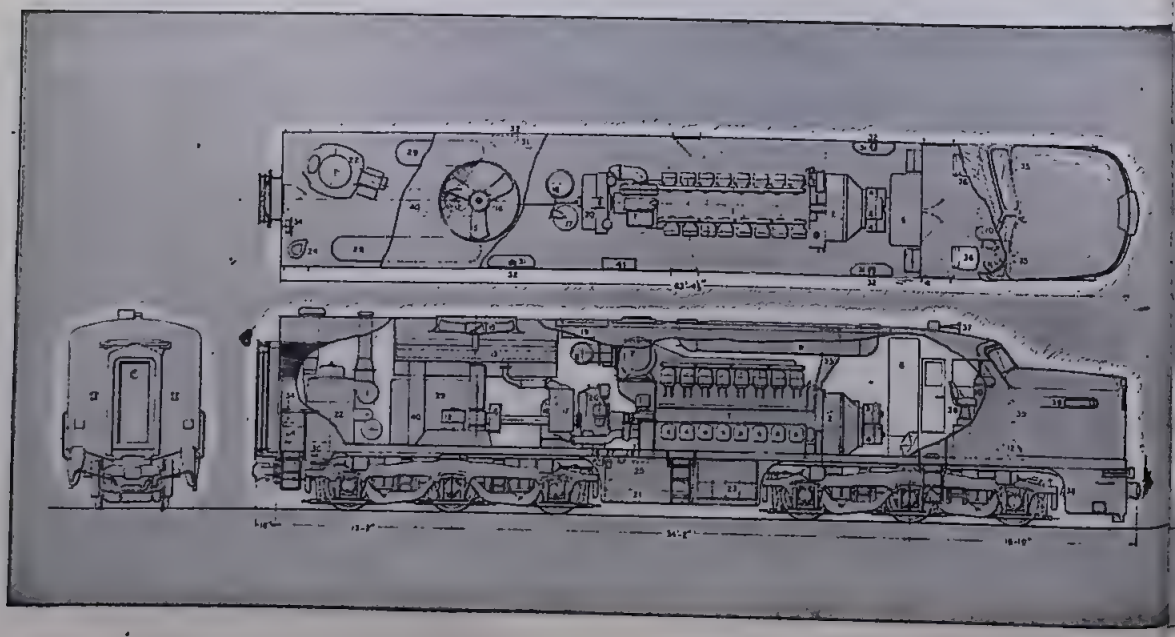
Climaxing 109 years of locomotive building, the American Locomotive Company has just delivered its 75,000th locomotive to the Atchison, Topeka & Santa Fe Railway. It is a three-unit, 6000-horsepower Diesel-electric built in conjunction with the General Electric Company, the first of an entirely new line of Diesel-powered locomotives. It will be used on the Santa Fe's *Super Chief* on the 2355-mile run between San Diego and Los Angeles, Calif., and Chicago, and was designed to operate a million miles before major overhaul.

The locomotive consists of one "B" and two "A" units and thus may be operated in both directions without turning. Each unit has a single V type four-cycle 16-cylinder turbosupercharged Diesel engine of 2000-horsepower rating, developing a starting tractive effort of 61,000 pounds per unit or 183,000 pounds for the locomotive. Each unit is 49 feet 8 inches long and weighs 304,500 pounds. The weight is evenly distributed over the six driving axles.

The Diesel engine which is the heart of the locomotive is the result of 33 years of research and experimentation in Diesel engine design. One of the biggest disadvantages of Diesel-electric locomotives has been the great weight per horsepower. This new engine, by means of constant pressure turbosupercharging, utilizes the hot exhaust gases efficiently to drive a gas turbine. This in turn operates a compressor which forces air into the cylinders at high pressure. Getting more air into the cylinders accomplishes two purposes: thoroughly cleansing the cylinders of exhaust gases, and permitting more fuel to be burned with a resulting higher output of power from the engine. Alco claims this Diesel is 100 per cent more powerful on a displacement basis than conventional heavy-duty railroad Diesels.

The fact that a single Diesel engine develops 2000 horsepower means that up to three fewer

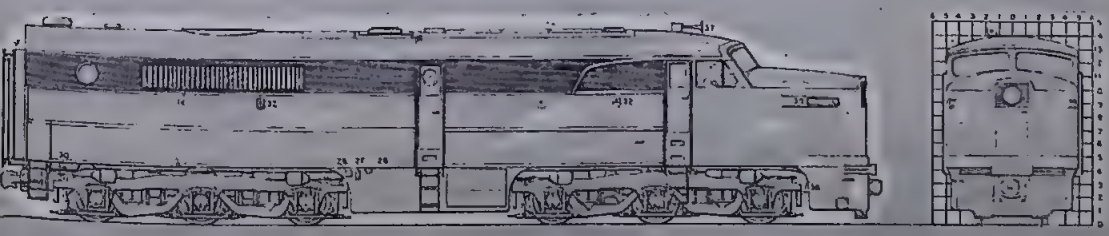
→ Two of the three units which make up the new Santa Fe locomotive, pictured (before being painted Santa Fe colors) at Mauch Chunk, Pa., during road tests on the Lehigh Valley Railroad. ↓ Plan and elevation of "A" (control) unit.



AMERICAN LOCOMOTIVE COMPANY'S

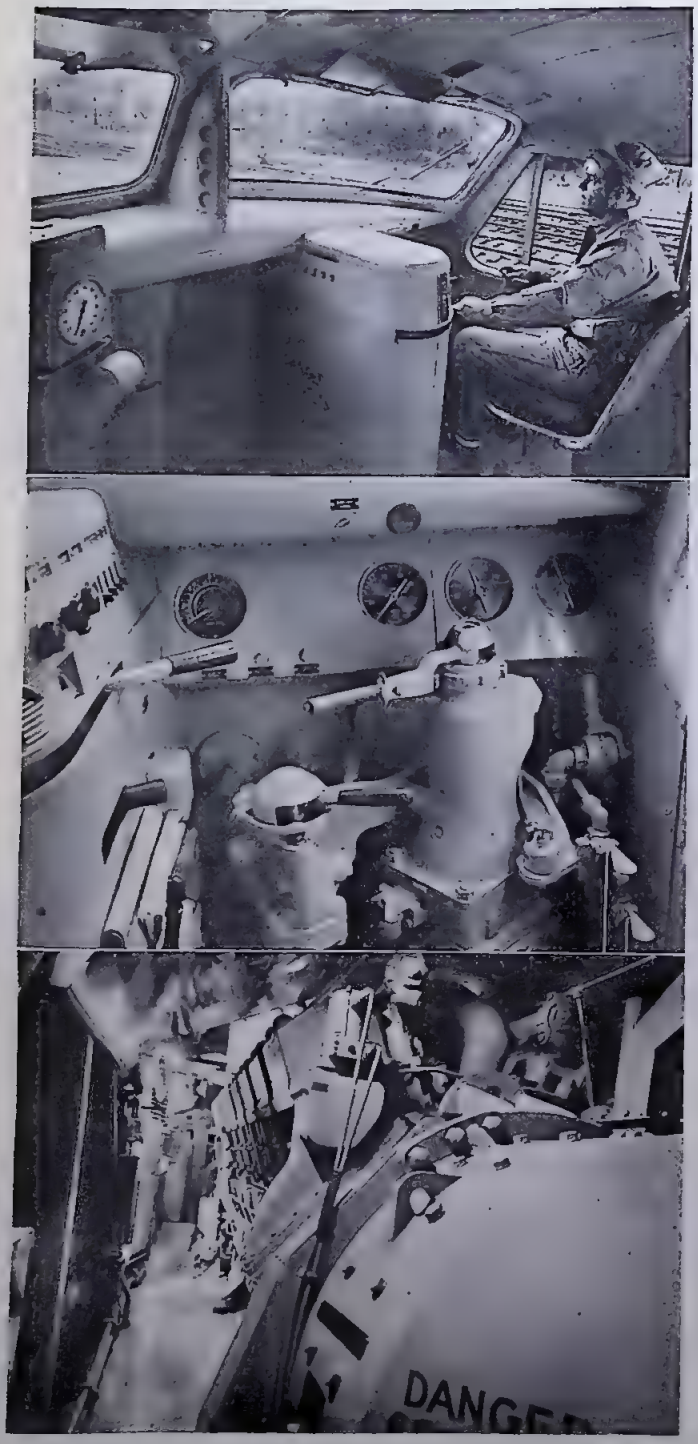
75,000TH LOCOMOTIVE

1 - ENGINE
2 - MAIN GENERATOR
3 - EXCITER
4 - AUXILIARY GENERATORS
5 - TRACTION MOTORS
6 - CONTACTOR DEPARTMENT
7 - TURBOSUPERCHARGER
8 - TURBOSUPERCHARGER FILTERS & SILENCERS
9 - DYNAMIC BRAKE GRIDS & BLOWERS (MODIFICATION)
10 - CONTROL STAND
11 - BRAKE VALVES
12 - TRACTION MOTOR BLOWERS
13 - RADIATORS
14 - RADIATOR SHUTTERS
15 - RADIATOR FAN
16 - RADIATOR FAN CLUTCH
17 - LUBRICATING OIL COOLER
18 - LUBRICATING OIL FILTERS
19 - ENGINE WATER TANK
20 - AIR COMPRESSOR
21 - MAIN AIR RESERVOIRS
22 - STEAM GENERATOR
23 - BATTERIES
24 - TOILET
25 - FUEL TANK
26 - FUEL TANK FILLING CONNECTION
27 - FUEL TANK GAUGE
28 - EMERGENCY FUEL CUT OFF
29 - WATER TANKS
30 - WATER TANK FILLING CONN'S
31 - SAND BOXES
32 - SAND BOX FILLING HOLES
33 - GENERATOR AIR DUCT
34 - HAND BRAKE
35 - CAB HEATERS
36 - SEAT
38 - BELL
39 - NUMBER BOX
40 - TOOL BOX
41 - ENGINE CONTROL PANEL



Diesels and main generators are required per locomotive than in most existing models, greatly simplifying maintenance and servicing, and thus cutting costs.

Using both hydraulic and electrical controls, the locomotive is designed for speeds up to 120 miles an hour with smooth stops and starts. Generators, traction motors, controls and other electrical equipment are manufactured by the General Electric Company, while the chassis, trucks, Diesel engine and other mechanical equipment are made by Alco.



The 6000-horsepower locomotive is a big sister of the 4500-horsepower fast freight locomotives in use on the Gulf, Mobile & Ohio Railroad. Major difference is the use of 16-cylinder engines in place of the 12-cylinder Diesels of the 4500-horsepower jobs. Ninety-eight per cent of all wearing parts on the "6000" and "4500" are interchangeable.

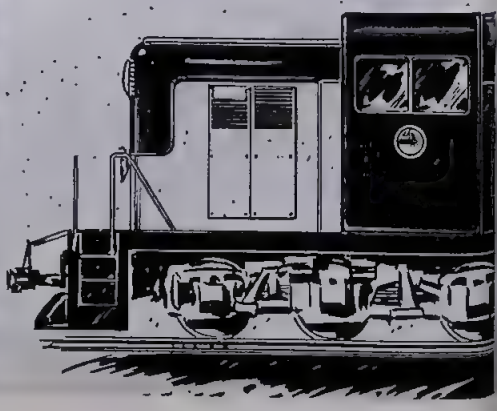
Alco is now in the midst of a multimillion-dollar conversion of its Diesel facilities to obtain assembly-line production. The erecting shop at Schenectady, N. Y., has been enlarged to 230,000 square feet. In this shop, locomotives will be built in sections and subassemblies, the various units joining on the main assembly line in sequence as needed. Production of one complete three-unit locomotive every day is expected to be reached by the end of 1947. Time-saving machinery is extensively used, one example being an electrical heat-treating device (still under test and not yet in everyday use) which cuts the time of a heat treatment once taking 26 hours down to a mere 35 seconds.

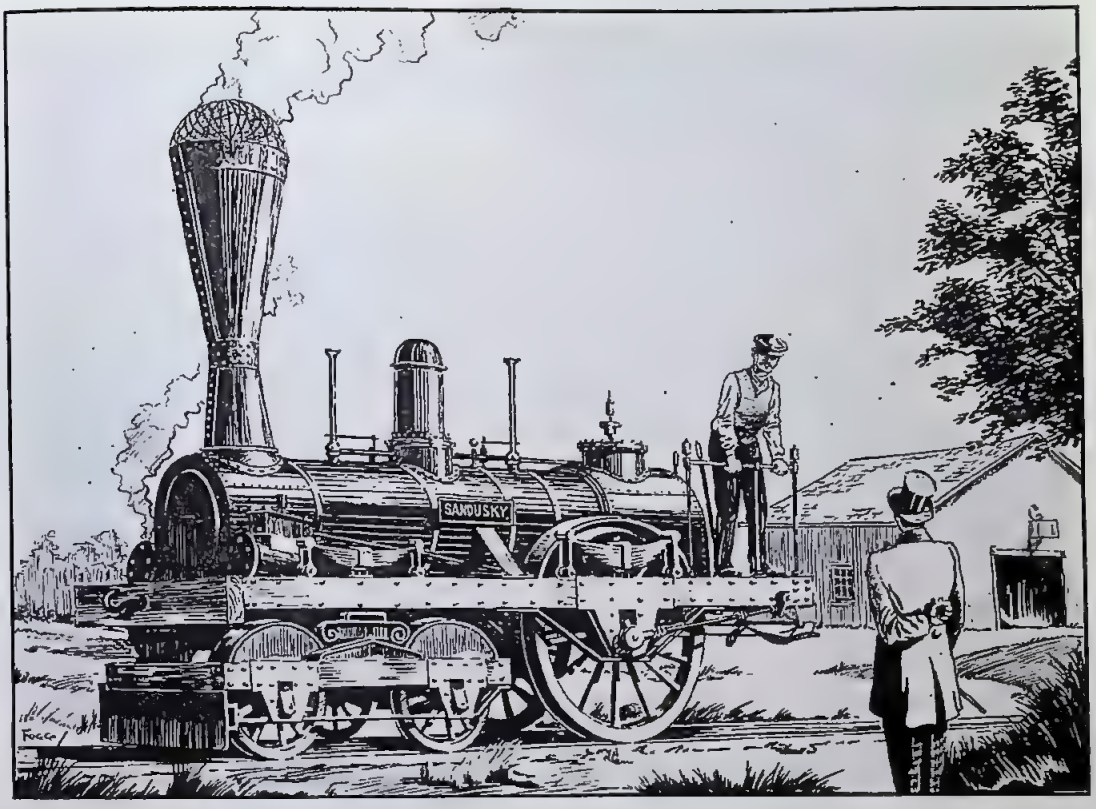
The American Locomotive Company's first locomotive was the *Sandusky,* built in 1837, the first locomotive to be used west of the Ohio River. In the intervening years Alco has built more locomotives than any other company in the world, and they are in use all over the world. America's first

↑ When an engineer sits down at the controls of American's new locomotive, it's as if he were ready to take the family for a ride in his automobile. Full vision of the

track is afforded by the large automobile type windshield. His chair is as comfortable as a seat in a modern coach, and the controls are conveniently placed. He enjoys a quiet cab which makes it easy to hear the fireman as he calls out the signal indications. ← Back in the engine room, the fireman finds ample room to move about the huge 16-cylinder Diesel as it turns the 600-volt direct current generator. ↑ Front end of Santa Fe's new Alco locomotive.

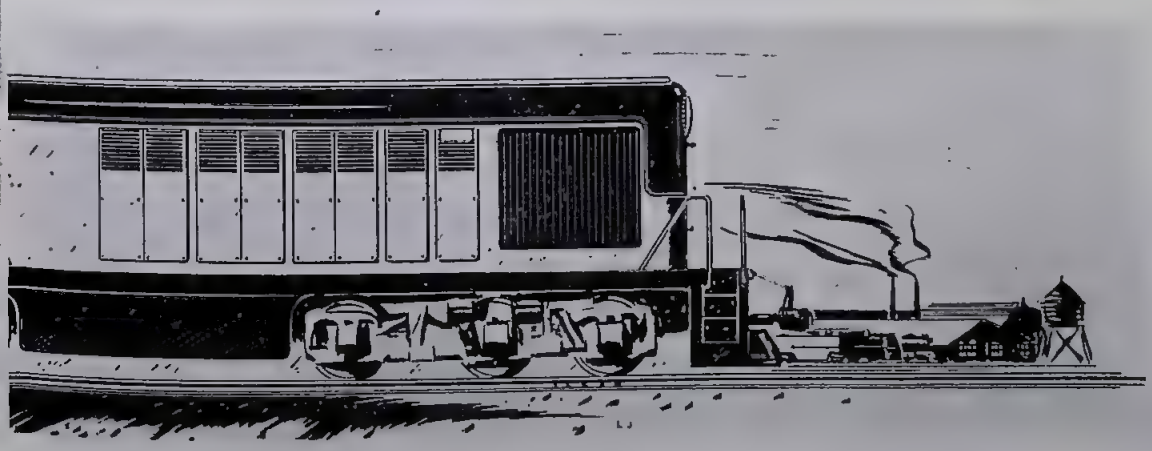
↑ The first Diesel-electric locomotive in America was the Jersey Central 1000, built in 1925 and still in daily service. ← The GM&O 710 is a 1500-horsepower unit, one of 45 being built by Alco-GE for GM&O fast freight service between St. Louis, Mo., and Mobile, Ala. ↗ Alco's first locomotive, the Sandusky, which was built in 1837 at the original plant at Paterson, N. J., was the first locomotive used west of the Ohio River. ↓ A 1500-horsepower switcher now in shops.





Diesel-electric locomotive was built by Alco in conjunction with General Electric and Ingersoll-Rand. It was a switcher with box type cab and controls at both ends. The subsequently designed hood type switcher with one cab has become the standard design of switching locomotives. Alco is now working on a new switcher making use of its new Diesel engine.

Today the American Locomotive Company is still producing steam locomotives for world consumption at the rate of five steam engines to two Diesels. Domestic consumption, however, reverses the ratio to 2:1 in favor of the Diesel. Alco officials say the Diesel locomotive may eventually supplant steam power, but point out that today's figures are not conclusive due to shortages of the materials needed to build steam locomotives.



Down-East Terminal

Portland, Me., is a busy interchange point for Boston & Central and Maine Central railroads

BY JOHN H. WILLIAMS

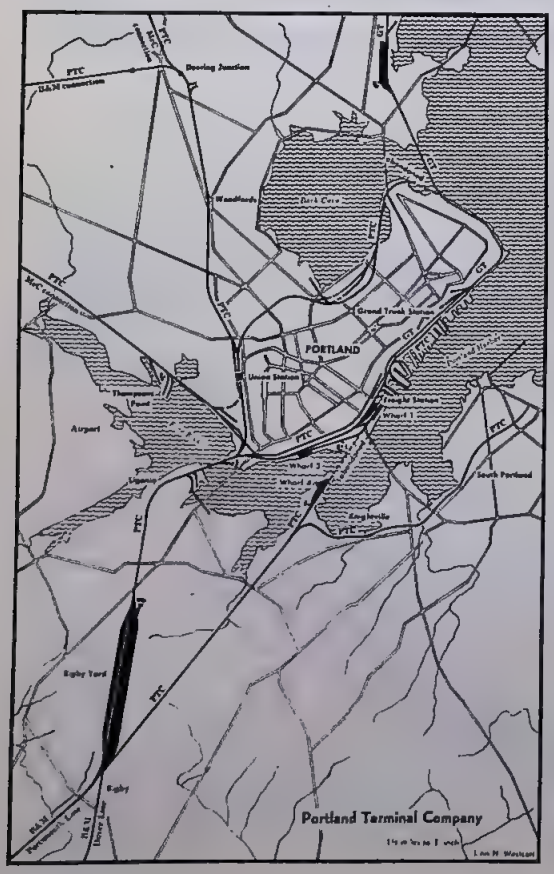
Portland, Me., although a city of only modest size (population about 80,000), is a large and thriving railroad terminal. Here the Boston & Maine and the Maine Central railroads make their principal interconnection; and here the subsidiary Portland Terminal Company operates the complete facilities of yards, wharves and the Union Station.

Rigby Yard, 2½ miles southwest of the passenger station, controls the interchange of freight between the two roads. In 1945, 785,000 cars were handled here.

Freight traffic through Rigby is headed by the imposing total of 40,000 to 45,000 southbound carloads of potatoes annually from the great fields of Aroostook County in the northern tip of the state. Pulpwood and paper—40,000 and 28,000 carloads—follow closely in that order.

Along Portland's busy waterfront the Terminal Company's facilities include four modern wharves, three in Portland and the fourth across the harbor in South Portland. Imports of high-grade pulp from the Scandinavian countries constitute a substantial portion of the traffic, and coal shipments from Hampton Roads rank high in tonnage. Six major oil companies maintain large bulk plants in the South Portland area and most of the rail shipments of gas and oil for Maine and northern New Hampshire originate here.

Union Station, on the western fringe of Portland's business district, handles a thriving



Although entirely separate railroads, the Boston & Maine and Maine Central are correlated and conveniently have the same president: affable, heavy-browed Edward S. French, who is also president of the MC owned and controlled Portland Terminal Company. Thus when the MC takes over the Flying Yankee at the Terminal Company's Union Station ↗, E. S. French is still in top command. ↓ Pine Tree at Tower 1. MC local freight in Rigby Yard →.

All photos by J. H. Williams, 41 Fruit St., Worcester, Mass.

passenger traffic. Through trains on the Boston-Portland-Bangor run frequently carry 14 or 15 cars, while the *Gull* (Boston to Halifax) and the *State of Maine Express* (Portland to New York) regularly carry capacity loads. Between Boston and Portland the *Pine Tree*, the *Flying Yankee* and the *Kennebec* offer five nonstop runs on approximately a two-hour schedule. At Union Station passenger trains eastbound for Maine Central points change from B&M to MC power; westbound this change is reversed. Of the nine tracks passing through the station, 1 to 7 are used by passenger trains, while 8 and 9 are reserved for freight service exclusively.

Busiest period in the Union Station is from 3:10 to 7:45 p. m., when eight MC and five B&M trains arrive and two MC and four B&M trains depart. Of these, three are through trains: the *Kennebec*, arriving at 4 (September, 1946, schedules) on the MC and departing at 4:15 on the B&M; the *Pine Tree*, arriving at 5:35 on the B&M and leaving at 5:45 on the MC; and the *Flying Yankee*, arriving at 7:15 on the MC and leaving at 7:25 on the B&M. Another busy period is from 5:20 to 8 a. m., which sees the arrival of three trains (two B&M, one MC) and the departure of seven (four MC, three B&M). During this period the *Gull* arrives on the MC and departs via B&M. During the entire day eight trains run through the station from one railroad to the other.

The enginehouse at Rigby, with stalls for 40 locomotives, services the motive power of the B&M and the MC and that of the Terminal Company as well. Here, at almost any hour of the day, one will find a varied array of power: 4-6-2's, 4-6-4's, 4-8-2's, 2-8-0's, 2-8-2's, 2-10-2's.

Switching service in the terminal area is handled chiefly by eight Diesel-electrics plus a few standard 0-6-0's.

From its incorporation in 1887 until 1911 the Portland Terminal Company was known as the Portland Union Railway Station Company. Its properties, which now include 126.94 miles of tracks (112.68 miles owned, 14.26 leased) as well as the freight and passenger terminals in Portland, South Portland and Westbrook, are served by 22 locomotives, 12 service cars and 200 coal cars. ↓ No. 1052 is a 1000-horsepower Diesel, one of eight such engines which serve the terminal area.

↑ The enginehouse at Rigby, which services Boston & Maine and Maine Central locomotives as well as those of the Portland Terminal Company, has stalls for 40 engines. On the approaches are, left to right, MC 466 (4-6-2), MC 655 (2-10-2), MC 468 (4-6-2) and B&M 4021 (2-8-4). ↓ Westbound for connection with the New York, New Haven & Hartford Railroad at Worcester, Mass., B&M 4017 tugs train PW-2 past Tower 1 at the west end of Rigby. On this day PW-2's consist is 84 cars.

THE LAST of the WOOD BURNERS

By Lucius Beebe

Photographs by the author and Charles M. Clegg from their forthcoming book, "Mixed Train Daily"

Out behind the shops and enginehouses and in the shadow of the four towering chimneys of the vast Brooks-Scanlon Corporation lumber mills at Foley, Fla., is a pile of rusted and disintegrating cabbagehead smokestacks, souvenirs of the days, not so many years ago, when all the motive power of the Live Oak, Perry & Gulf Railroad as well as that of its parent corporation, Brooks-Scanlon, was wood burning, as befitted one of the biggest lumber mills in the South. Today Brooks-Scanlon's private road engines are still wood burners, both in the deep yellow pine forest of the interior and in the yards at Foley, but in 1943 the last of the company's Live Oak, Perry & Gulf's locomotives was converted to coal burning operation.

"In three years the price of coal has been hiked on us three times, and I'm thinking about changing the whole setup to Diesel," M. J. Foley, president of the concern, told us. "But I don't think we could get along without No. 5. That's the pride and joy of the mill, and I think our men would walk out on us if we didn't keep it in commission just as it is."

Outside in the bright Florida noontide, No. 5 rolled slowly by with a cut of timber cars, a proud aristocrat among locomotives and obviously a member of the old order. From the sparkling brass

Immaculate No. 5 is a wood burner used in freight service in the yards of the mighty Brooks-Scanlon Lumber Corporation at Foley, Fla. She sometimes works as far out as Perry, Fla., on the main stem of Brooks-Scanlon's Live Oak, Perry & Gulf Railroad.

candlesticks on either side of its headlight and the deer horns mounted in the oldest of railroading traditions, to its tender filled with sawmill scraps, No. 5 bespoke long hours of affectionate labor by its crew. The smokebox and boiler lagging shone blue and glistening under the tropic sun, the tires of its drivers were scrupulously rimmed with silver paint, and off the backhead of the boiler, with its gleaming brass pipes and feedlines, one could eat dinner without hesitation.

"Once in a while we run her out on the main

Until only a few years ago all the Live Oak, Perry & Gulf engines were wood burners, like this one shown on the smoky end of a daily mixed train at Perry. Passenger accommodations are out of sight at the rear of the train.

line as far as Perry," Mr. Foley said. "That's five miles, and there's no reason why she should not go on to the other end of the run to Live Oak. That's 40 miles. Only we have no fueling platforms for her to wood up at anywhere along the line, so she sticks pretty much to the yards nowadays. We load her from a chute, just the same as we would from a coal tipple, only it's filled with scrap and trim from the planing mill."

No. 5, a Baldwin-built Prairie type engine, was the only one in running order at Foley at the moment, although a somewhat less elegantly maintained sister wood burner was over the pit in the shops near by having its grates overhauled. In the woods to the south were several other wood burners, we were told, none of them so splendid as No. 5 and none of them boasting a true cabbagehead stack. Their stacks are conventional capped chimneys with a spark arrester in the smokebox.

The Live Oak, Perry & Gulf was one of the last railroads serving as a common carrier and with regular passenger service to use wood-burning motive power, and even today its converted Ten-Wheelers with soft coal in their grates are as wonderfully maintained as they were in the old days. A round trip the entire length of the line, 44 miles, is scheduled every day, and a daily mixed consist also makes a round trip by way of Mayo on a branch connecting with the main line at Mayo Junction, 20 miles west of Live Oak. The mixed trains carry either a combine or an antiquated coach, and during the war passenger revenue was not inconsiderable.

This railroad, originally chartered as the Live Oak & Perry Railroad Company, has been a going concern since 1903, when its original segment of track from Live Oak to Milepost 31 was built by Thomas and R. L. Dowling, owners of the Dowling Lumber & Naval Stores Company. It was extended through to Hampton Springs, a resort town 15 miles west of Foley, in 1906, and during the Florida boom of the middle '20's it did a handsome passenger business on this branch, its passenger revenue sometimes running to $60,000 and $70,000 a year. Up till 1915 its engines carried tall balloon stacks rather than the round cabbagehead chimneys of a later era. The Hampton Springs branch was torn up after the hotel there closed in 1944, and today the railroad passenger revenue doesn't run

The daily northbound freight train of the Marianna & Blountstown now uses coal, but the engine looks just as it did when wood fuel was used.

to much more than $3000 to $4000 annually.

The LOP&G connects at Perry with the South Georgia Railway and the Atlantic Coast Line, and at Live Oak with the ACL and the Seaboard Railway. Its greatest traffic, naturally enough, is in lumber, both rough and finished, and more than half of its mixed and freight trains are cars loaded with Brooks-Scanlon's products.

The talk in Perry's various lumber workers' saloons had it that other wood-burning private railroads are scattered around Florida, notably those of P. B. Wilson Company at Holopaw in Osceola County about halfway down the peninsula of Florida, and in the yards of the Putnam Lumber Company at Cross City a few miles south of the LOP&G. There was also talk of a common carrier some 80 or 90 miles to the west of Perry, the Marianna & Blountstown, that still maintained wood-burning power. Investigation proved, however, that even the Marianna & Blountstown burned its last cordwood fuel back in 1944, although its engines, never possessed of the cabbage stacks of the Live Oak, Perry & Gulf, are identical in appearance with what they previously were. Photographically it might still be functioning on turpentine knots in all its original glory.

The M&B is not without its interesting aspects, however, according to O. O. Miller, its general manager. It is owned by Alfred F. du Pont of Wilmington, Del., who came by it quite incidentally to the purchase of a large tract of timberland during the Florida boom of 1926. Out of 1200 shares of the railroad outstanding, 1197 had been held by the original lumber company, and Mr. du Pont was surprised when, one fine morning, he woke up to find himself owner of an up-and-going little railroad 29 miles long. A parallel incident is recorded by Petronius in his "Satyricon," wherein Trimalchio, the Roman millionaire capitalist, once discovered the island of Sicily casually included in a list of recently acquired real estate. Mr. Miller had not heard about Petronius but recalls that Mr. du Pont has never ridden on his own railroad. There are no passenger accommodations on the trains, anyway.

Elsewhere the legend of the wood burners persisted. The 76-mile-long South Georgia Railway, running northward from its connection with the Live Oak, Perry & Gulf at Perry to Adel in Georgia, was variously reported still to have a couple of wood burners and to have scrapped them. Investigation at Quitman, where the South Georgia's shops are located, disclosed that neither of these is in fact the case. In 1943 it converted its three wood burners to coal, and their cabbage stacks, mournful reminders of brave yesterdays, are rusting beside the roundhouse where J. J. Davis, the road's master mechanic, showed them to us.

"We ran shy of yellow pine three or four years ago, but I hated to see the old times go," he remarked. "We'd been trailing turpentine smoke through the woods since 1897, yes sir. A long time, and when you get as old as I am you don't like change. It ain't always progress."

A shrieking Ten-Wheeler with the insigne of the Georgia & Florida on its tender boiled past on the main line and Mr. Davis allowed that business was so brisk they had to lease an extra engine to help out the three on their own power roster. From 1906 through 1926 the South Georgia had paid fabulous dividends, sometimes as high as $60 on a $100 par share, but of late its operating profits have been far more modest. Railroad connoisseurs know the South Georgia as the present possessor of a singularly well proportioned Ten-Wheeler, No. 6 of the now abandoned Kishacoquillas Valley

Blountstown yards of the Marianna & Blountstown Railroad, one of the last railroads in the Deep South to abandon wood as a locomotive fuel.

← Fuel for the last of the wood burners is stacked on wooding-up platforms strategically placed along the Mississippi & Alabama right of way. This was once a familiar sight on all railroads. ↙ The M&A's tender carries turpentine knots.

Railroad, purchased from that road after its tracks were torn up a few years since.

Up in Louisiana the Red River & Gulf, owned and operated by a lumber industry, also once was wood burning, but its two remaining locomotives today burn more conventional fuel and a great part of its trackage is being torn up. The RR&G's No. 200, a noble cabbage stack Prairie type engine, is still in good operating condition in the company yards at Long Leaf. La., where the line exchanges freight with the Missouri Pacific, but it hasn't been fired up in several years. On an adjacent rip track are three or four even older engines with huge balloon stacks waiting to be broken up for scrap.

Aside from being distinguished by the presence of four members of the Crowell family among its executives, the Red River made the public prints during the war years when it resisted pressure for its sale to the army to be used as a full-size working experiment in demolition. Army engineers were anxious to dynamite its trestles and tie knots in its rails for practice purposes, but the owners resisted all bids. Today most of its track except the 12 miles between Long Leaf and LeCompte by way of Holdup is being torn up by a junk concern.

Like fossilized relics of the era of crawling animal things in the shallow waters of inland seas, there seemed to be traces of the evidence of wood burners all around us. Their discarded shells were everywhere at hand; their tracks ran endlessly, like those of forgotten swamp monsters across the Mississippian soil, and might eventually form deposits of shale for future excavators to ponder over. But the living crustacean himself seemed to have perished from the changing face of the earth, and we mourned for the little Ponchartrain Railroad running out of New Orleans in the '80's and over piles and trestles to happy picnickings at Bayou St. John; we mourned the *Nancy Hanks,* crack varnish train of the Central of Georgia in the '90's, celebrated for its wood smoke trailing for miles behind its

↖ The Gulf, Mobile & Ohio's Rebel is met daily except Sunday at Vinegar Bend by the Mississippi & Alabama. ← Here the Diesel-driven Rebel passes venerable No. 4, burning wood, as the M&A's locomotive works the exchange track.

daily going through the astonished countryside. It was named by William Wadley, builder of the Central of Georgia, not for Abe Lincoln's mother, but for a race horse of the identical name. Colonel Wadley, an admirer of horseflesh in the old southern tradition, caused a likeness of his favorite mare to be etched in the stained glass windows of the parlor cars and otherwise insinuated into the decorative scheme.

The ghosts of the cabbage stacks were at every turn, as was the legend of their brave flowering, but the only authentic wood burners we had actually encountered were those in the yards of lumber companies, like gentle dinosaurs in well-upholstered zoos. We wanted them untamed and running free.

It was a cool spring morning in Alabama, 75 miles north of Mobile, the day we discovered what, so far as can be established, is the last wood-burning common carrier anywhere in the United States. Mobile, the night before, had been celebrating Mardi Gras in a sort of miniature imitation of New Orleans, which was currently doing the same thing on an epic scale of uproar and hooray, and we had absorbed a preposterous quantity of whisky which was certainly not the kind Kentucky colonels are forever hoisting through their imperials in the distillers' advertisements.

When, beside the improbable iron of the Mississippi & Alabama Railroad a few miles outside of Vinegar Bend, Ala., we discovered what was to all appearances a wooding-up platform liberally stocked with turpentine knots cut of a length for locomotive boilers, we inclined to credit the illusion to the evening previous, which had been devoted to ill-advised enterprise in the Battle House taproom. It would go away later.

But when the up-train from Leaksville, 27 miles down the line from Vinegar Bend, came into view under a creditable facsimile of a forest fire combined with a Paine's Fireworks representation of the Burning of Chicago, we knew that nothing but fat pine on the grates could ever produce such a traveling conflagration, and, moments later, the contents of the tender justified us.

The Mississippi & Alabama's only locomotive, a tolerably well preserved 2-6-2, lamentably lacks a cabbagehead stack in the great tradition; a spark arrester inside the smokebox prevents it from putting the adjacent landscape to the torch. Three or four wooding-up platforms along the right of way between Vinegar Bend and Leaksville provide fueling facilities at convenient intervals, but as the major portion of the road's revenue derives from turpentine logs bound for the trying furnaces of Mobile, it might quite well consume part of its own freight in an emergency. There are occasional high cars of finished woods from the mills at Leaksville and, the day we discovered the M&A, it was hauling out two carloads of mine props bound for the coal pits of Belgium aboard a vessel then loading in Mobile. The Gulf, Mobile & Ohio's daily drag freight would pick them up that afternoon from the Vinegar Bend exchange track.

Passengers and the mails on the M&A may ride aboard its caboose, a jaunty vehicle devoid of sashes in its windows or doors in the door frames, or in a gasoline motor wagon bearing a strong resemblance to the closed vans favored by Little Sisters of the Poor and other charitable orders in large cities.

This particular day the GM&O's *Rebel* was two hours off schedule, and both the steam train and the motor van were on hand when it drew into Vinegar Bend and started unloading mail sacks. It is doubtful if, except in railroad pageants and similar inspired groupings, such dramatic contrasts were ever spotted on adjacent tracks as were represented by the crimson-painted Diesel-electric srteamliner and the last wood burner, panting under a cloud of undulant soot in a brake in the Alabama woodlands.

Vinegar Bend itself is a communal last chapter. Once, a local ancient told us, it was a hustling township boasting a huge planing mill, numerous stores and residences and a 42-room hotel. The railroad owned half a dozen engines, each one smokier and more pyrotechnical than the next, and life went on at a giddy pace. But the family that lived in semi-feudal magnificence amidst the conveyor belts and circular saws and fresh wood smells had fallen on evil days. The near-by timber had been exhausted, the mills had shut down, the workers had moved away. Today no trace of the teeming years remain except a boarded-up 17-room house, in which live two senescent and declining descendents of the Turner family, and the stucco station of the Gulf, Mobile & Ohio Railroad. The Mississippi & Alabama is only a vestigial trace of the railroad it once was, and it and the Mississippi Export Railroad, a number of miles to the south and completely Dieselized, are now the two ends of the same 80-mile-long parent railroad with the center section abandoned. For its 17 miles of track the M&A now pays $5000 a year rental

Vinegar Bend Wood Burner

Passengers on the up-train in the morning to meet the Mobile-bound Rebel may ride either the caboose ↑ or the motor van with flanged wheels → which carries the Leaksville mail. Vinegar Bend, at the eastern terminus in a land of trees and a world of lumber, is the precise ghost town counterpart of scores of vanished towns that once flourished and were populous in the mining regions of Colorado. The last one of the wood-burning locomotives is now head-end power on what is literally a ghost train to yesterday.

New Railroad Books

BIG DAN: THE STORY OF A COLORFUL RAILROADER, by Frank Cunningham. 350 pages, 9" x 6½". $3.25. Published by Deseret News Press, Salt Lake City, Ut.

A biography of an old-time railroader who started as a part-time apprentice machinist with the Norfolk & Western in 1892 and ended his railroad career as master mechanic on the Denver & Rio Grande Western 53 years later. Written by Frank Cunningham, a nephew of "Big Dan," as Daniel Goode Cunningham is affectionately called, the book depicts some of the gusto of early-day railroading in the South and a glimpse of frontier operation in the West.

From a Virginia plantation in Bedford County where "Big Dan" was born, the book carries him through adolescence, then to college and finally to general foremanship of the N&W shops at Portsmouth. Probably the author is at his best when describing plantation life in the Old Dominion and pioneer railroading in the South. From the N&W Big Dan (he is 6 feet 4 inches in height) went to the Santa Fe shops at Needles, then to be superintendent of motive power of the Moffat Road, and ultimately to the Rio Grande as master mechanic of the Salt Lake Division. The book is well illustrated and is indexed.

DIESEL-ELECTRIC LOCOMOTIVE, by Charles F. Foell and M. E. Thompson. 658 pages, 6½" x 9½". $7 in U. S., $8 elsewhere. Published by Diesel Publications, Inc., 192 Lexington Ave., New York 17, N. Y.

A technical work describing the operation and maintenance of Diesel-electric locomotives in America. The volume is designed for those whose knowledge of Diesels is scant, and for others who are well informed but wish to have a comprehensive survey of the field. Starting with the history of Diesel power units, the book stresses the advantages of such power and then goes on to explain the types in current use. The engines, generators, running gear and accessories are outlined with many illustrations and diagrams. An appreciable part of the contents is devoted to maintenance. The book is indexed.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933.
Of Trains, published monthly at Milwaukee, Wis., for Oct. 1, 1946

State of Wisconsin, County of Milwaukee, ss.

Before me, a notary public in and for the state and county aforesaid, personally appeared A. C. Kalmbach, who, having been duly sworn according to law, deposes and says that he is the publisher of TRAINS and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor and business manager are: Publisher, A. C. Kalmbach, 4821 W. Woodlawn Ct., Milwaukee 13, Wis.; Editor, A. C. Kalmbach, 4821 W. Woodlawn Ct., Milwaukee 13, Wis.; Business Manager, Virginia Kazda, 1006 N. 9th St., Milwaukee 3, Wis.

2. That the owner is: Kalmbach Publishing Co., 1027 N. 7th St., Milwaukee 3, Wis., and that the names and addresses of stockholders owning one per cent or more of total amount of stock: William B. Calhoun Jr., Route 2, Box 594, Irving, Tex.; Drayton Cochrane, 157 E. 63rd St., New York 21, N. Y.; W. D. Collett, 2142 E. 97th Place, Chicago 17, Ill.; Alexander L. H. and Ruth O. Darragh, 5836 N. Wayne Ave., Chicago 40, Ill.; Robert J. Fakler, 2874 S. Delaware Ave., Milwaukee 7, Wis.; Arthur E. Hughes, 605 Murdock Rd., Baltimore, Md.; A. C. Kalmbach, 4821 W. Woodlawn Ct., Milwaukee 13, Wis.; B. G. Kalmbach, 4821 W. Woodlawn Ct., Milwaukee 13, Wis.; Mae C. Kalmbach, Caddo Gap, Ark.; Henry H. Kirtland, 3820 Lakeside Rd., Pewaukee, Wis.; J. C. O'Hearn, 1609 N. 40th St., Milwaukee 8, Wis.; M. D. Thornburgh, 105 S. Mulberry St., Chillicothe, O.; L. H. Westcott, 1362 N. 39th St., Milwaukee 8, Wis.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is: (This information is required from daily publications only).

A. C. Kalmbach, Publisher

Sworn to and subscribed before me this 27th day of September, 1946.

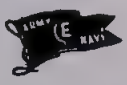
Shirley Hackbarth, Notary Public
[SEAL] (My commission expires Oct. 25, 1949).

M.P.*

If it's a MANTUA PRODUCT it's good, and model railroads like their big brothers are no better than their rolling stock and roadbed. Mantua locomotives, cars, switches, track are all as good as our years of "top of the heap" manufacturing can make them. Unlike big railroading, model railroaders still have "virgin" territory to build their lines . . . If you start with Mantua, you'll grow! Ask any hobby dealer about Mantua Products.

* Missouri Pacific is a great 'road, too!

Write for our booklet on miniature railroading and our prewar catalogue—25c



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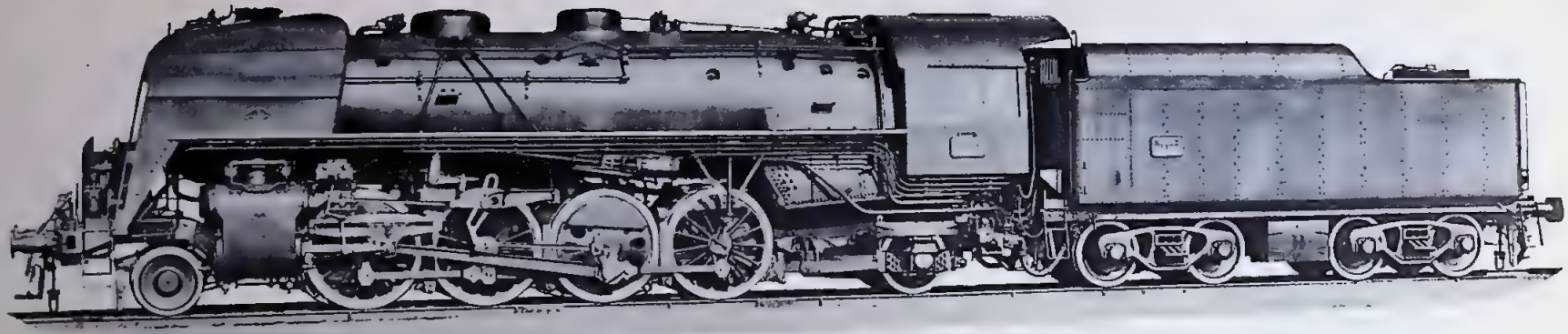
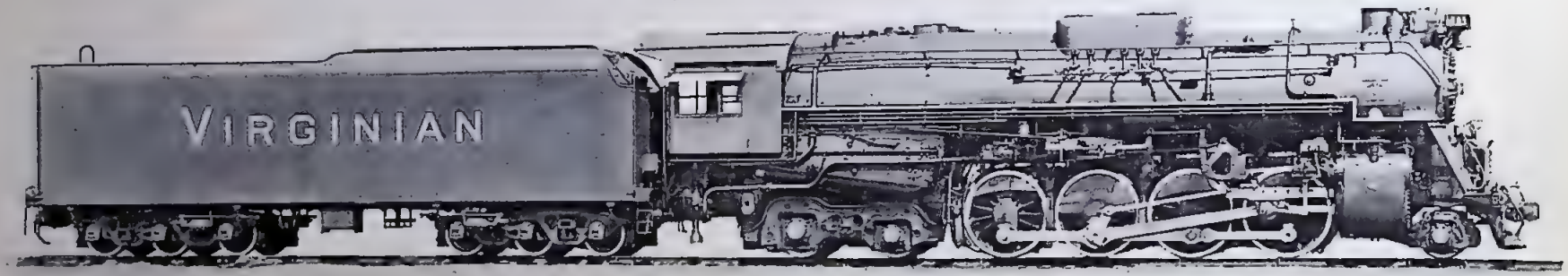
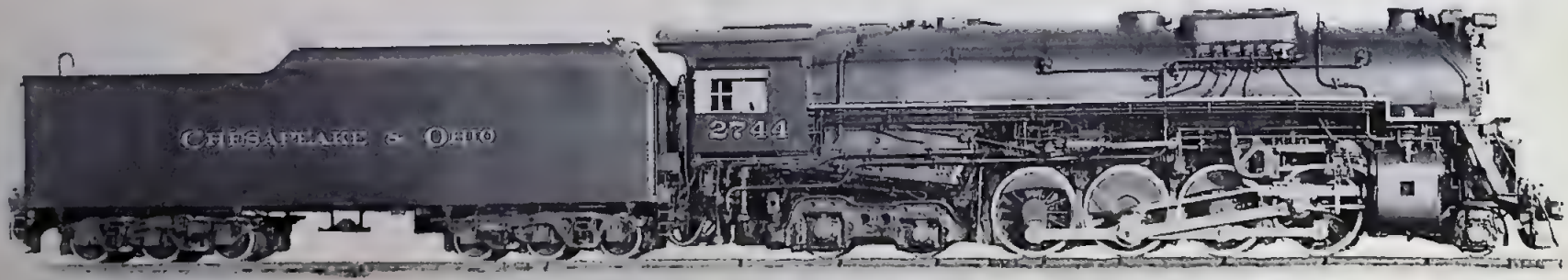



VIRGINIAN


CHESAPEAKE & OHIO
2744

LIMA LOCOMOTIVE WORKS, INCORPORATED

LIMA, OHIO

Class: 284-S-469 — Built for CHESAPEAKE AND OHIO RAILWAY CO. — Road No. 2744

R. R. Class: K-4 — Order Covers 10 Locos. Nos. 2740-2749

GAUGE OF TRACK	DRIVING WHEEL DIAMETER	FUEL KIND	CYLINDERS		BOILER		FIREBOX	
			DIAMETER	STROKE	O.D. FRONT	PRESSURE	LENGTH	WIDTH
4'-8½"	69"	SOFT COAL	26"	34"	87 11/16"	245 LBS.	135 1/16"	96¼"

WHEEL BASE			TRACTIVE POWER		FACTOR OF ADHESION	TUBES & FLUES		
DRIVING	ENGINE	ENGINE AND TENDER	MAIN CYLINDERS	WITH BOOSTER		NUMBER	DIAMETER	LENGTH
18'-3"	42'-0"	93'-2"	69350	83350	4.22	73 202	2¼" 3½"	19'-0"

AVERAGE WEIGHT IN WORKING ORDER, POUNDS						GRATE AREA SQ. FT.	HEATING SURFACES, SQUARE FEET				
ON DRIVERS	TRUCK	TRAILER		TOTAL ENGINE	TENDER ⅔ LOAD		TUBES AND FLUES	FIREBOX & COMB. CHAM.	ARCH TUBES & SYPHONS	TOTAL	SUPER-HEATER
		FRONT AXLE	REAR AXLE								
292600	47900	61300	67100	468900	315090	90.3	4308	344	122	4774	1932

Tender, Type 12 Wheel — Capacity, Water 21000 Gallons — Fuel, 30 Tons

LIMA LOCOMOTIVE WORKS, INCORPORATED

LIMA, OHIO

Class: 2-8-4-S-460 — Built for THE VIRGINIAN RAILWAY COMPANY — Road No. 505

R. R. Class: BA — Order Covers 5 Locos. Road Nos. 505-509

GAUGE OF TRACK	DRIVING WHEEL DIAMETER	FUEL KIND	CYLINDERS		BOILER		FIREBOX	
			DIAMETER	STROKE	O.D. FRONT	PRESSURE	LENGTH	WIDTH
4'-8½"	69"	SOFT COAL	26"	34"	87 11/16"	245 LBS.	135 1/16"	96¼"

WHEEL BASE			TRACTIVE POWER	FACTOR OF ADHESION	TUBES & FLUES		
DRIVING	ENGINE	ENGINE AND TENDER	MAIN CYLINDERS		NUMBER	DIAMETER	LENGTH
18'-3"	42'-0"	93'-2"	69350	4.26	73 202	2¼" 3½"	19'-0"

AVERAGE WEIGHT IN WORKING ORDER, POUNDS						GRATE AREA SQ. FT.	HEATING SURFACES, SQUARE FEET				
ON DRIVERS	TRUCK	TRAILER		TOTAL ENGINE	TENDER ⅔ LOAD		TUBES & FLUES	ARCH TUBES & SYPHONS	FIREBOX & COMB. CHAM.	TOTAL	SUPER-HEATER
		FRONT AXLE	REAR AXLE								
295600	46000	57500	61300	460400	326600	90.3	4308	122	344	4774	1932

Tender, Type 12 Wheel — Capacity, Water 25000 Gallons — Fuel 21 Tons

LIMA LOCOMOTIVE WORKS, INCORPORATED

LIMA, OHIO

Class: 282-S-254 — Built for FRENCH SUPPLY COUNCIL — Road No. 141-R-1029

R. R. Class: R — Order Covers 80 Locos. Road Nos. 141-R-1021 to 141-R-1100

GAUGE OF TRACK	DRIVING WHEEL DIAMETER	FUEL KIND	CYLINDERS		BOILER		FIREBOX	
			DIAMETER	STROKE	O.D. FRONT	PRESSURE	LENGTH	WIDTH
4'-8½"	65"	SOFT COAL	23½"	28"	73½"	220 LBS.	102¼"	78¼"

WHEEL BASE			MAXIMUM TRACTIVE POWER	FACTOR OF ADHESION	TUBES AND FLUES		
DRIVING	ENGINE	ENGINE AND TENDER			NUMBER	DIAMETER	LENGTH
17'-0"	35'-8"	66'-8"	44500	3.96	175 36	2" 5⅜"	17'-0"

AVERAGE WEIGHT IN WORKING ORDER, POUNDS					GRATE AREA SQ. FT.	HEATING SURFACES, SQUARE FEET				
ON DRIVERS	TRUCK	TRAILER	TOTAL ENGINE	TENDER LOADED		TUBES & FLUES	SYPHONS	FIREBOX & COMB. CHAM.	TOTAL	SUPER-HEATER
176250	36270	41250	253800	161635	55.5	2405	63	231	2699	704

Tender, Type 8 Wheel — Capacity, Water 8070 Gallons — Fuel 12.62 Tons

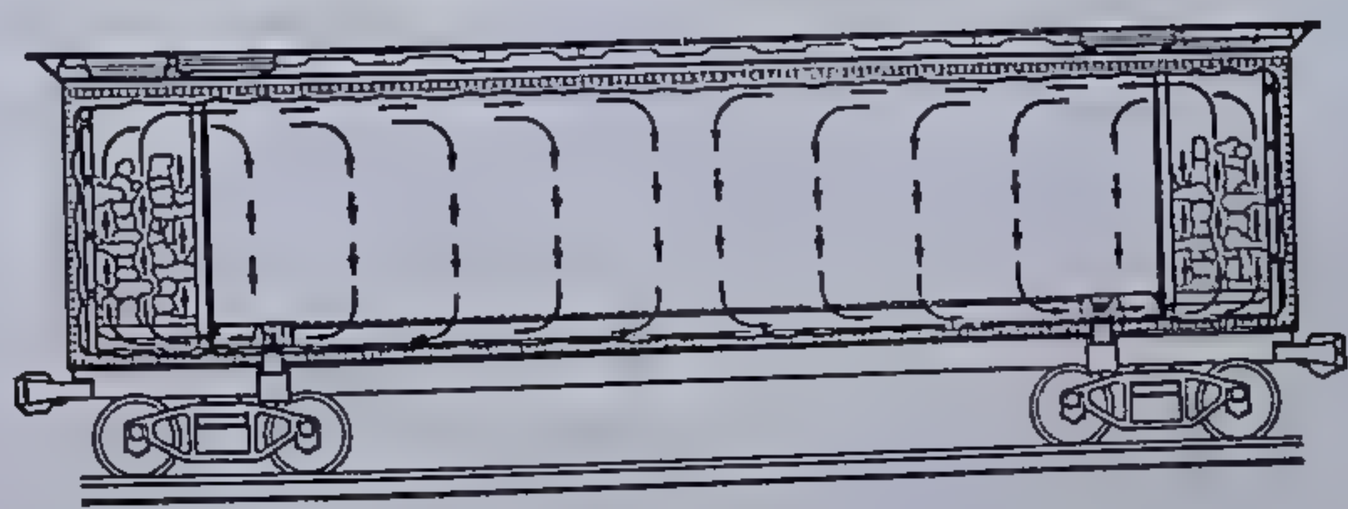
Photograph on reverse side

Page Mr. Ripley—for, believe it or not, the Burlington has two guinea pigs, each over 40 feet long. They are new refrigerator cars, specially built by the Burlington. Incorporated in their construction are advanced ideas in refrigeration, ventilation, and heating for the protection of perishables in transit.

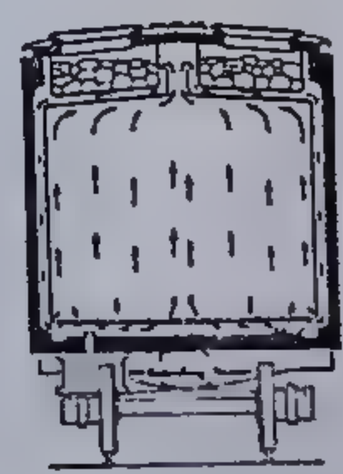
These two new cars are now being used for research and testing, under the direction of a committee representing shippers and receivers, the Association of American Railroads, the United States Department of Agriculture, Refrigerator Car owners, and other agencies.

Building these cars is part of the Burlington's long-range protective service program in seeking to perfect the all-purpose refrigerator car. We already have invested several million dollars in improving perishable-freight handling facilities and equipment—also devoting considerable time and effort to the study of lightweight car materials and construction.

New cars of this type will improve the protection of foods and other perishables transported by rail. They are another Burlington contribution to better freight service for all America.



End-Bunker-Fan Car (left) • *Ice is in conventional vertical end basket bunkers. Fans circulate the air upward through the ice bunkers into the body of the car, thereby equalizing temperatures of air and commodity throughout the load.*



Overhead Bunker Car (right) • *Ice is in the shallow basket bunkers suspended from car ceiling; air circulation in car is maintained by natural convection. Note that cycle of circulation is crosswise of car, rather than lengthwise as in end-bunker cars.*

BURLINGTON LINES

Everywhere West

AN ESSENTIAL LINK IN TRANSCONTINENTAL TRANSPORTATION

Collection of Granville Thomas, P. O. Dept., Millville, N. J.

Something different in the way of United States railroads was the Bradford & Foster Brook, a monorail line which opened in 1878 and was sold at a foreclosure sale in 1879. Little information is available. Poor's "Railroad Manual of 1879" states briefly that the line ran from Bradford, Pa., to Derrick City, Pa., four miles, and that no reports of operations or financial condition were furnished. The Railroad Gazette of March 7, 1879, reports the road was sold on February 21 of that year and was bought by a Dr. E. P. Allen. "The road is about six miles long," states the Gazette. "It has not been successful so far, chiefly from the difficulty of getting a suitable locomotive." Allen planned to extend the road.

Diesel Fire Extinguishers

Fires in Diesel locomotives can now be detected instantly and extinguished quickly with equipment developed by the C-O-Two Fire Equipment Company and the Pyrene Manufacturing Company, installations of which have been made on the Seaboard Railway. The system detects fires automatically either underneath or inside the locomotive. While the train must be stopped to fight fires underneath the locomotive or alongside the right of way, interior fires can be extinguished while the train is in motion.

The detecting equipment operates in the presence of smoke from a smoldering fire which does not give off enough heat to operate a fixed temperature thermostat. Heat-actuated thermostats are also used for detection of fast-flashing fires. The smoke detecting apparatus safeguards the battery boxes and the under side of the locomotive. Air is drawn in continuously through pipes to the smoke detector and is exhausted through louvers. When smoke is present, an electronically operated device sounds a gong and lights a "smoke alarm" light in the cab. Fires over the engines are detected by a heat-actuated device which turns on a red "fire alarm" light in the cab and sounds a gong.

Fires in the engine compartment are extinguished by means of a built-in carbon dioxide system. Supplementary protection for fires inside or underneath the engine is provided at each side in the form of a hose reel unit, portable extinguishers and a foam playpipe. Fires along the right of way can be extinguished as far as 100 feet from the train.

Limited Trains

A limited train is a passenger train meeting one or more of the following specifications:

(1) Bearing a distinctive name.

(2) Operating at an over-all speed of 40 miles an hour or more for distances of more than 200 miles.

(3) Operating for distances of more than 300 miles with scheduled stops at intervals averaging not less than 50 miles.

Peak Year of Rail-Laying

Railroad expansion in the United States reached its peak in the 1880's. From 1880 to 1889 inclusive, 74,720 miles of new railroad lines were built. The largest number of miles completed in any one year was 12,876 in 1887.

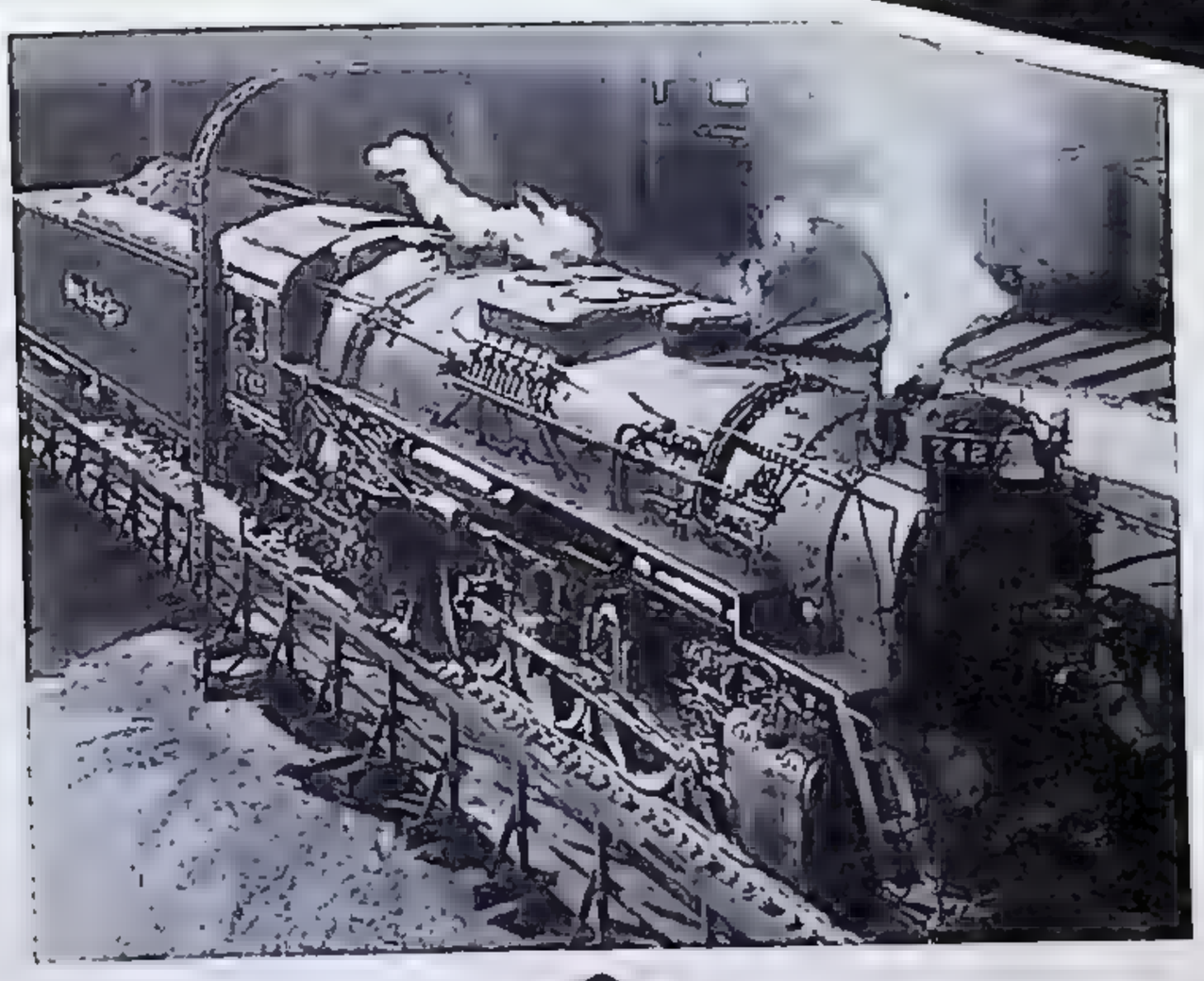
Hubba, Hubba!

A woman's slim ankle still has more pulling power than the world's most powerful locomotive. *Life* magazine was all set to devote several pages to the Union Pacific's Big Boy locomotives recently. At the last minute Marlene Diedtrich came into the news and the pages were used for pictures of Miss Diedtrich instead!

Railway Investment

As of January 1, 1944, the recorded investment in railroad property in the United States was $27,136,-803,000.

HEAVY PAYLOADS



. . . at

passenger speeds

The Nickel Plate's fleet of 55 Lima-built 2-8-4's enables them to maintain the necessarily fast schedules required by today's freight demands. During the past five years, this railroad has been building up its motive power to enable it to handle maximum payloads at a maximum of efficiency and economy.

Freight train schedules are rapidly approaching the speeds of passenger schedules. Keep abreast of the times with power that is capable of meeting today's ever increasing demands.

LIMA LOCOMOTIVE WORKS INCORPORATED

LIMA LOCOMOTIVE WORKS, INC.

LIMA, OHIO

A MODEL FOR YOUR MANTEL OR DESK

Many different roads

For the railroad man or fan who wants a true-to-scale (¼" scale) miniature of his favorite box car, Athearn's popular kits provide colorful, fully-detailed models from which to choose. Kit includes all parts and easy-to-follow instruction sheet, processed lettered and painted metal sides. Choice of C&NW, Nickel Plate, NYNH&H, Southern, NP, SP, UP, GN, Soo, CNR, Santa Fe El Capitan, Grand Canyon, Scout and Super Chief. Kit with trucks, $5.50. RI aluminum, $6. NYC Pacemaker (pictured), $6.25.

CLIP AND MAIL COUPON TODAY

Irvin R. Athearn

Manufacturers of O Gauge
Model Railroad Equipment
Los Angeles 44, Calif.

Please print carefully. State which road you want.

Irvin R. Athearn, 11129 Van Buren Ave., Los Angeles 44, Calif.

Enclosed find $_____, please send me _____ kit of the _____ 40-ft. box car.

Name _____

Address _____

City _____ Zone _____ State _____

RUNNING EXTRA

Frank P. Donovan Jr. is TRAINS' Fact Finding Committee of one. As research editor he not only has charge of the voluminous files of railroad material which is available for use in TRAINS, but is constantly adding to those files minor and major bits of information which, maybe next month, maybe five years from now, will be just the appropriate piece to add to the value of some article.

Such a job, dreary as it may seem to the schoolboy who wants to trade his textbooks for a job as a railroad engineer, is right down "Don's" alley. His first contact with TRAINS was as a free-lance writer of railroad articles, and as such he will be remembered by many readers of the magazine. But when he accepted his present position it was with the understanding that he didn't have to do a thing but research, because he doesn't like to write!

That does not mean that Don has entirely forsaken the pen. He currently has two railroad articles under way, working on them as the mood strikes him. Besides the articles which have appeared in TRAINS and other publications, "Death Comes for the Indiana," "Pacific Electric," "Minneapolis & St. Louis," "The Real Toonerville Trolley," and others, Don's name appears on the flyleaf of two books, as author of "The Railroad in Literature" and as co-editor of "Headlights and Markers."

Don's desk is flanked by filing cabinets and bookcases. The filing cabinets contain folders of photographs, clippings and miscellaneous facts classified by railroad and subject matter. The bookcases, of which TRAINS always seems to be running short, contain volumes on many railroad subjects, histories of systems, car books, locomotive books, signaling books, and many others. Also included are old and rare bound volumes of *Railway Gazette* and *Official Guide*.

Besides this reference material to which TRAINS is always adding, files are kept of other sources which may be tapped as occasion demands so that TRAINS is able to give its readers accurate as well as interesting information.

Railroad

Most Interesting, Prettiest

I have ridden nearly every short line in the country and have worked as a fireman on the Pennsy. The most interesting and prettiest ride I have ever taken was on the Clinchfield Railroad from Spartanburg, S. C., to Elkhorn City, Ky. Few people hear much about this line and its northern terminus can't be found on a road map. However, it has one of the fastest scheduled freight trains in the world even though it travels through as mountainous a country as you can find anywhere. It passes through the Great Smokies, past Mount Mitchell, past Table Rock and over and through several other mountain ranges. It goes through the breaks of the Big Sandy, a rock gorge that beats anything I have ever seen for beauty. The road itself is very well kept and modern. It has more tunnels than any other road its size in the country. It has one passenger train a day each way. The coaches have red plush seats and a spittoon at each seat. At lunch time the conductor wires ahead to a small station where a woman prepares box lunches for those who want them. And what a lunch! Fried chicken, corn bread, pie, cake and pickles — enough for three people, for 50 cents. At Elkhorn City the Cumberland Hotel offers a nice place for railroad men and travelers alike to board and lodge.

S. N. Zook, R. 1, Bareville, Pa.

Crackers Sell Better in Cellophane

I don't take part in useless arguments with bigoted steam fans; I regret but do not bemoan abandonments of uneconomical trackage; a guy can eulogize the "brass railed observation" — and all I say is that crackers sell better packed in cellophane than out of barrels. Give me a spot like Rahway, N. J., where you can see just about everything there is in railroading — unless you insist on Diesel — and the most of it. I think even a rabid steam fan would turn to look at a pair of GG-1's "racing each other" at 80-per plus. The April issue gave a very good idea of the PRR electrification, which is the "ultimate of the ultimate." The utter efficiency of this kind of railroading amazes even railroading men. I think some of the PRR officials themselves are still amazed.

Howard L. Spies, 930 16th St. N. W., Washington 6, D. C.

Don't Be Gettin' Ideas, Bub!

The article "Race Train to Bowie" in the August TRAINS mentions the engine crews leaving to watch the races. Is any provision made to prevent unauthorized persons from stealing an engine? I have often wondered about this. Autos can be locked, and trolley cars have an "engineer's wrench" which the motorman can remove for safety's sake. What about steam engines?

Wilfred A. Miller, R. 2, Southport, Conn.

[Locomotives have been stolen. A thief with a working knowledge of railroad operations mounted "extra" flags on a locomotive at Milwaukee some years ago and was passed by many towermen as an authorized movement, but he was caught miles away in Illinois and given a stiff sentence. Railroad rule books state that engineers "must not leave their engines while on duty except in case of necessity, and then the fireman or some competent person will be left in charge."—*Ed.*]

Want to Ride the Head End?

If you were to ride the Rock Island Southern from Monmouth to Galesburg, Ill., you would undoubtedly get to ride the head end. Service is performed with a large electric freight motor which originally ran on the Detroit United System. Since no caboose is used, this is the only place to ride.

Harold Nyberg, 4 Pioneer Ave., Battle Creek, Mich.

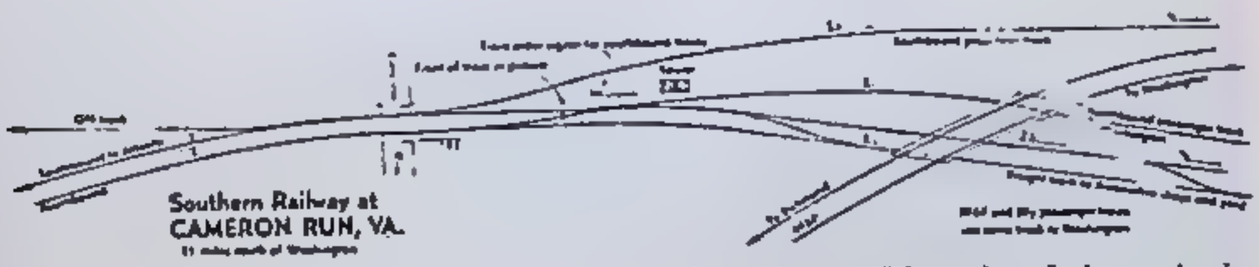
[A note on the timetable of the RIS as printed in the *Official Guide* reads: "Passengers are carried in the caboose."—*Ed.*]

Mail

Explanation of a Signal

Perhaps you can help me by explaining the photo on page 13 of the September issue. Which track does the signal in the right foreground protect? How can it show clear when a train is approaching against it? It appears that the tower is in back of the camera and were the scene the limit of the interlocking wouldn't the signal have a pointed blade? Even if the main line is single track I think the signal should be in the stop position. I am curious to know more about this.

W. E. Hoffman, 326 S. East Ave., Baltimore 24, Md.



[The Southern Railway gives this explanation: "The signal is a train order signal and not one of the interlocking signals. It has nothing to do with the train illustrated. It is in the clear position for a southbound train movement to be made on the far track to the right, which is the southbound passenger track and parallel to the route occupied."—*Ed.*]

Paper Shortage

I wish to register a strong complaint over the poor paper used in the September issue of TRAINS. I fully realize there is a paper shortage, yet the *Saturday Evening Post*, *Life* and *Colliers*, to mention a few, still use good paper. They use more of it than you do. They can get it, why can't you?

Don McLeod, 3024 12th Ave., S., Minneapolis, Minn.

[Many of the larger publications purchased their own paper mills during the war, and at the end of paper rationing threw the full production of these plants into their own expansion programs, taking that much paper off the open market. TRAINS is not yet big enough to own its own paper mill and thus must get along as best it can. We felt that printing the September and October issues on poor paper was better than printing no issues at all for those two months, and that was the only alternative.—*Ed.*]

Keeping the Record Straight

Just to keep the record straight: The *Texas Special* is jointly operated by the Frisco and the Katy. I note in your August issue, in your story "Through to Texas and Mexico City," you refer to the "M-K-T *Texas Special* Route."

Paul M. Morris, Director of Public Relations, Frisco Lines, St. Louis, Mo.

[Whoops! We're sorry.—*Ed.*]

East Wind Revived

The *East Wind*, all-coach train between Washington and Bangor, Me., has been restored to service after being a war casualty. It runs over the same route that the *State of Maine Express* takes through Providence, R. I., to accommodate southern New England travelers, and on to Worcester, Mass.

John J. Swanson, 86 Napoleon St., Woonsocket, R. I.

Varied Consist

The MoPac's *Sunshine Special* now carries an exceptionally varied consist. Aside from six to 10 Pullmans in each section, it carries Pennsy, B&O, and NYC equipment. The T&P, of course, has always been represented. . . . The first section of the "*Shine*" is now carded from Poplar Bluff, Mo., to North Little Rock, 178.69 miles, in 179 minutes, including two stops. Carrying from 14 to 17 cars, this speaks well for the 20-year-old Pacifics and 4-8-2's handling this train.

Walter M. Adams, 300 State St., Apt. C., Little Rock, Ark.

SECOND SECTION

"I am a freight agent for a railroad fast freight organization," writes R. E. Lyman of the International Forwarding Company, Oakland, Calif. "I discovered a number of years ago that one of the easiest and most pleasant ways of getting freight away from my 15 competitors is to dramatize my business; to throw an aura of glamour and color around the railroads.

"A good way to do this is to tell interesting anecdotes about railroad freight service, but an even better way is to show pictures. I carry with me a brief case with a built-in ring binder, and on this, arranged like the pages of a book, are pictures with celluloid jackets to keep them clean and fresh—pictures that illustrate the various phases of the business. . . . There is hardly a question that a shipper can ask that cannot be answered by showing him a picture, map, or diagram, and frequently he may go through the entire book of 24 pages and without realizing it has learned in 10 minutes facts he could not remember after a two-hour lecture. The pictures I use are taken from various magazines, but the greater part of them come from TRAINS and your albums.

"Among every agent's field of prospects there are sure to be some genuine railroad fans, and when he finds one, there could not be a nicer present for that railroad fan than one of your albums. . . . Right now I'm planning to allot at least $25 of my Christmas expense to your albums, and I can't think of a better way to please 25 of my business friends."

* * *

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6. New England Railroads
7. Electric Railways
8. Pennsylvania Railroad
9. New York Central Railroad
10. Modern Steam Locomotives
11. Southern Pacific Lines
12. Santa Fe Railway
13. Baltimore & Ohio Railroad
14. Erie Railroad
15. Great Northern Railway

Others are in process.

* * *

The annual index for Volume 6 of TRAINS (November, 1945-October, 1946) is included with all subscribers' copies of this issue. Newsstand readers who wish a copy of the index can obtain one simply by writing and requesting it. It's free.

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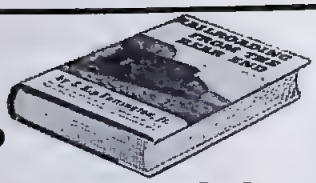

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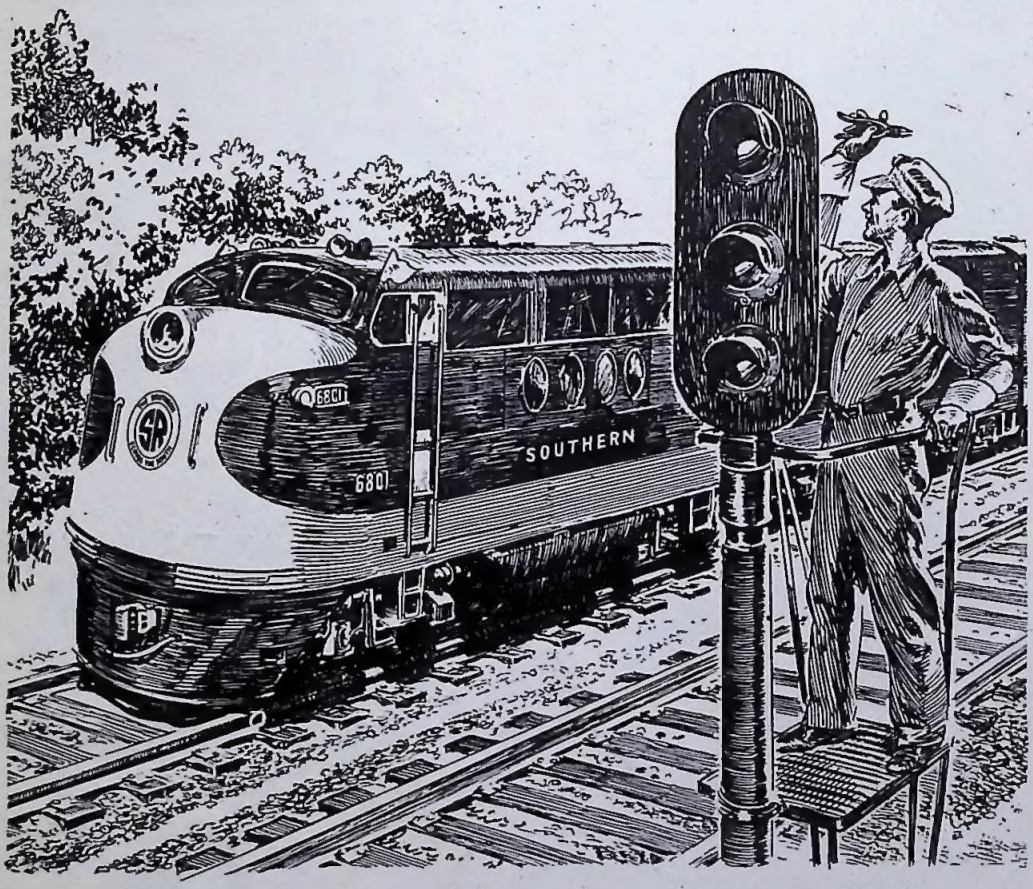

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This costly modernization and improvement program is tangible evidence of our abiding faith in the future of the South.

To us, it's a future so bright that even Bob's greeting of "Hello, Beautiful" doesn't begin to express our enthusiasm for what's ahead.

Ernest E. Norris
President

SOUTHERN RAILWAY SYSTEM

THE SOUTHERN SR SERVES THE SOUTH

Supplement to TRAINS—*November, 1946.*

Trains Index to Volume Six

November, 1945 — October, 1946

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An asterisk (*) indicates a feature article.

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